

Volume 3

Pages 457 - 683

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

BEFORE THE HONORABLE VINCE CHHABRIA

| | |
|--------------------------------------|---------------------------|
| OAKLAND BULK & OVERSIZED TERMINAL,) | |
| LLC,) | |
|) | |
| Plaintiff,) | |
| vs.) | No. C 16-7014 VC |
|) | |
| CITY OF OAKLAND) | |
|) | San Francisco, California |
| Defendant.) | Friday |
|) | January 19, 2018 |
|) | 10:00 a.m. |

TRANSCRIPT OF PROCEEDINGS

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FRIDAY - JANUARY 19, 2018

10:02 A.M.

P R O C E E D I N G S

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THE CLERK: Calling Civil Case No. 16-CV-7014,
Oakland Bulk & Oversized Terminal, LLC versus City of Oakland.

THE COURT: There is no need for appearances unless
there is anyone new who is here.

MR. FELDMAN: Actually, there is one new person.
Counsel has agreed, and I may note for the record, the presence
of Nathan Feldman, who was admitted to the Bar on December 1st
of last year.

THE COURT: Welcome.

MR. SWEDLOW: No relation.

THE COURT: Oh, no relation? Okay. I was going to
make a joke about that, but I won't.

What's next?

MR. MYRE: Just a few preliminary evidentiary issues
if -- if I may, your Honor. The first is I have a thumb drive
that we have labeled Exhibit 1278. This contains copies of the
videos that we played for the Court on Tuesday. So we would
just like to admit that into evidence.

THE COURT: Great.

(Trial Exhibit 1278 received in evidence)

MR. MYRE: The second is that we filed roughly a week
ago a very few limited written discovery designations. So RFAs

1 from the Sierra Club, those are at Docket Entry 213 and
2 Exhibit B to that. So 213-2 is our designations. The Sierra
3 Club has some counter designations. Those are at 213-3 in the
4 docket.

5 We would like to move those into evidence as well.

6 **THE COURT:** Okay. Admitted.

7 (Trial Exhibits 213-2 and 213-3 received in evidence.)

8 **THE COURT:** Kristen tells me that you-all are going
9 to kind of submit everything together.

10 **MR. MYRE:** So that's generally correct, although that
11 brings us to the third issue.

12 **THE COURT:** Okay.

13 **MR. MYRE:** So now, in the beginning of trial on
14 Wednesday, we put on the record our agreement that the parties
15 basically have that -- as I understood and as I articulated it,
16 was that when -- when exhibits were introduced at trial, they
17 would be admitted if not specifically objected to subject to a
18 few of the standing objections that the City has.

19 **THE COURT:** Sounds right.

20 **MR. MYRE:** For the record and for the written record,
21 we wanted to put in today a list of what those exhibits were
22 through trial on Wednesday, just because plaintiffs will be
23 resting their case soon. So we sent that list to defendants
24 yesterday. We asked if they would stipulate to it in writing.
25 They said that they would not.

1 And so with the Court's permission today, we would like to
2 read into the record the list of exhibits that is the exhibits
3 that were admitted on Tuesday and Wednesday -- I'm sorry --
4 that were shown to witnesses on Tuesday and Wednesday and that
5 we think are subject to the standing agreement that I
6 articulated on Wednesday morning.

7 **THE COURT:** Okay. But, I mean -- and part of this is
8 maybe my fault for not being as precise about this, partly
9 because it's a bench trial and, you know, in the end it doesn't
10 really matter what I hear and what I don't hear during the
11 trial. What matters is what I consider after the trial in
12 rendering my decision. But I'm -- if somebody wants to argue
13 that something that came in during trial should not be
14 considered, if they want to argue that in the post-trial
15 papers, they can do that, even if, you know, somebody didn't
16 make an objection to something, a specific objection to
17 something during the trial.

18 And, you know, because I preferred to proceed more
19 efficiently at trial without having to deal with all that stuff
20 at trial, figuring we can deal with it afterwards.

21 So I wanted to make that clear. I don't consider anybody
22 to have waived any objections. And what I think is the best
23 thing to do is to the extent anybody has, like, objections
24 about, you know -- arguments about admissibility of certain
25 things as opposed to arguments about the weight of particular

1 things, they should just file -- you know, both sides should
2 file certain separate evidentiary objections in conjunction
3 with their post-trial papers afterwards.

4 **MR. MYRE:** That makes sense, your Honor. I think
5 maybe our concern is a little bit different. We just want to
6 make sure that somewhere in writing is memorialized the list of
7 documents that possibly fall into the categories that you might
8 consider or weigh at the end of the trial. That is, we wanted
9 to make sure that we have in writing the list of documents that
10 were introduced during plaintiff's case-in-chief.

11 **THE COURT:** Okay.

12 **MR. MYRE:** And so whether that's read into the record
13 now, do it some other way. But that's what's important to us,
14 I suppose, your Honor.

15 **THE COURT:** Okay. Go ahead.

16 **MR. COLVIG:** I would just say we -- we don't object
17 to their stating their position on what they believe. That's
18 fine.

19 **THE COURT:** Yeah. I don't know if it's necessary for
20 you to do this now, but if you really want to, go for it.

21 **MR. MYRE:** So Exhibits 4, 14, 19, 24, 25, 31, 32, 42,
22 46, 47, 48, 53, 57, 58, 62, 65, 96, 98, 103, 128, 131, 133,
23 135, 136, 138, 141, 145, 149, 166, 213, 214, 216, 217, 221,
24 281, 286, 371, 372, 388, 431 through 433, 435, 440, 448, 453,
25 454, 463, 466, 478, 515, 516, 522, 584, 593, 594, 596, 608,

1 612, 630, 635, 736, 738, 814, 815, 842, 844, 845.

2 Last row now, 848, 900, 915, 930, 960, 961, 972, 976, 982,
3 1069, 1083 through 1085, 1207, 1225, 1229, 1238 through 1261,
4 and 1267.

5 Thank you, your Honor.

6 **THE COURT:** Well done.

7 **MR. COLVIG:** I agree. So on behalf of the City, you
8 know, we -- we obviously have had these continuing objections.
9 We probably have a couple dozen that -- at least of those
10 continuing objections that would apply to specific documents,
11 and we will, as your Honor suggested -- we'll provide a list of
12 those so you can at least know which specific documents we
13 think that applies to.

14 **THE COURT:** And so while we're -- while we're on the
15 topic, do we want to nail down what the post -- what post-trial
16 filings I'm going to get from you-all and when they should be
17 due and stuff like that?

18 **MR. FELDMAN:** Could we do that at some other point
19 today?

20 **THE COURT:** Sure.

21 **MR. FELDMAN:** There is a good reason for it from my
22 perspective.

23 **THE COURT:** Sure.

24 **MR. FELDMAN:** Thank you.

25 **THE COURT:** Okay. Should we proceed then?

1 **MR. COLVIG:** We have one other -- do you have
2 something?

3 **MR. MYRE:** Just one more brief one.

4 So defendants are planning to play designations from James
5 Wolff today, deposition designations. We had very limited
6 counters to that, a minute and 22 seconds. And they
7 specifically addressed designations that they intend to play,
8 so they would basically provide context to that.

9 Just like we played counter designations of defendants for
10 Douglas Cole and Sabrina Landreth, we could ask that our
11 minute 22 be played with their -- however long it takes so it
12 all makes sense and presented in the most efficient manner,
13 although they don't agree with that.

14 **MS. LOARIE:** Just to represent defendant intervenor's
15 deposition, you recall when they played their Wolff
16 designations on Wednesday, they actually refused to let us play
17 our counter designations. I'm actually not sure why. So the
18 position I think the parties took for Wolff in particular was
19 that each party was playing --

20 **THE COURT:** It's not that you took. I seem to
21 remember you-all were telling me that you were going to wait to
22 present your Wolff counter designations.

23 **MS. LOARIE:** Originally that was true, your Honor.
24 And I believe the proceedings got a lot faster, so --

25 **THE COURT:** You know what? Any counter

1 designations -- whoever wants the deposition testimony to be
2 played, it comes out of their time.

3 **MS. LOARIE:** Yes, your Honor.

4 **THE COURT:** So what are we arguing about?

5 **MS. LOARIE:** They emailed at 10:00 p.m. last night
6 and changed our minds. So we were just confused. We thought
7 each party was playing their own for Wolff.

8 So apologies if there is any -- any confusion.

9 **THE COURT:** Okay. Anything else?

10 **MR. COLVIG:** Yes. There is one more.

11 Steve, do you want to discuss the Klein issue?

12 **THE COURT:** What issue?

13 **MR. COLVIG:** Heather Klein is the City planning
14 employee to -- initially submitted a declaration that was part
15 of our stipulation earlier in the week. And what we were left
16 with were several issues, but one of them was when particular
17 documents were received by the City. And so we then, with the
18 Court's authority, provided a declaration of her and we
19 uploaded that the other night and -- and -- with an opportunity
20 to cross-examine. And we have a stipulation that she need not
21 be cross-examined.

22 **THE COURT:** Okay.

23 **MR. COLVIG:** And a part of that stipulation is that
24 two exhibits will go into evidence as though they were
25 presented to her, and they do go into evidence and then there

1 is -- which ones are those?

2 **MR. SWEDLOW:** It's not -- it's not that they were
3 presented to her and they would go into evidence. We're not
4 going to cross-examine her declaration or her in person, but we
5 are reserving all of the arguments we would make about based on
6 the substantial evidence and the legislative filer record.

7 **THE COURT:** Okay.

8 **MR. SWEDLOW:** There are actually three. Two we
9 agreed upon, and one we don't agree upon.

10 The third is the archive.org or Wayback Machine printout
11 that led to her declaration. She has an -- she has an
12 attachment to her declaration that says there are 26 files
13 that -- that weren't on the website as of a certain date. The
14 only reason we know that is because we told opposing counsel
15 that we looked on the Wayback Machine and saw there were 26
16 files missing.

17 So without that exhibit in our post-trial briefing, the
18 argument won't make any sense to you. So I wanted to include
19 as Exhibit 1277 that website printout of the archive.org, and
20 you can take it for whatever weight you want. It just -- it
21 won't make sense in post-trial briefing if we don't have, as an
22 exhibit, the reason why her declaration says what it says.

23 **THE COURT:** Well, and it will come in now. And if
24 the City wants to argue that it's somehow not admissible or
25 shouldn't be considered, they can do that in their post-trial

1 briefs.

2 **MR. SWEDLOW:** So that would be -- the three exhibits
3 are 1272, 1273 and 1277.

4 **MR. COLVIG:** Okay. So as to Exhibit 1277, that is
5 the printout that counsel says was from the Wayback Machine.
6 And we object now and will be reasserting that it lacks
7 foundation.

8 The other two, which are Trial Exhibit 1272 and 1273, we
9 do stipulate into evidence.

10 **THE COURT:** Okay.

11 **MR. COLVIG:** Okay. Thank you, your Honor.

12 **THE COURT:** All right. So does the Plaintiff want to
13 call their next witness?

14 **MR. FELDMAN:** Claudia Cappio.

15 **THE COURT:** All right.

16 **CLAUDIA CAPPIO,**

17 called as a witness for the Plaintiff herein, having been duly
18 sworn, testified as follows:

19 **THE WITNESS:** I do.

20 **THE CLERK:** Thank you. Please be seated.

21 And for the record, please state your first and last name
22 and spell both of them.

23 **THE WITNESS:** My name is Claudia Cappio,
24 C-L-A-U-D-I-A, C-A-P-P-I-O.

25 **THE CLERK:** Thank you.

CAPPIO - DIRECT EXAMINATION / FELDMAN

DIRECT EXAMINATION

BY MR. FELDMAN

Q. Good morning.

A. Good morning.

Q. Nice to see you.

You were the lead staff person on behalf of the City?

A. Yes.

Q. There is a standard practice for the City attorney to review all Agenda Reports that go to the City Council?

A. Not all but most, yes.

Q. And all of the ones in this case were reviewed by the City attorney, right?

A. That's correct.

Q. And, in fact, you recall that the description in the September 2015 Agenda Report of Section 3.4.2 was written by Mark Wald, correct?

A. We were -- that -- that was one of the sections of the report that would have been drafted, initialed by him, yes.

Q. Thank you.

You had a conversation in or about August or September, 2015, with the Fire Marshal Miguel Trujillo about the NFPA rating assigned to coal that is the rating of 1, correct?

A. Yes. We wanted to understand the relationship of those NFP ratings to certain commodities.

Q. And he told you that was a low rating, right? As in a

1 good rating?

2 A. That was a low rating.

3 Q. Meaning low risk, right?

4 A. Low risk under certain circumstances.

5 Q. And he used those ratings to evaluate the materials that
6 would be stored in Oakland and in connection with responding to
7 emergencies, right?

8 A. It didn't go into that great detail. We were generally
9 trying to make sure that we, as staff, understood the NFPA
10 ratings and the relationship there would be to commodities that
11 would be handled and stored in the terminal.

12 Q. Did Mr. Trujillo tell you that they use it as a basis for
13 evaluating the materials that may be stored, managed or handled
14 on particular sites throughout the City of Oakland?

15 A. Yes, he did.

16 Q. And did he tell you that they use it when they are
17 responding to an emergency?

18 A. He said that it comes into play in an emergency because
19 that's why it's -- there's placards and other designations to
20 make sure that responders know what material they're dealing
21 with.

22 Q. Thank you.

23 And you brought the NFP rating to ESA's attention, did you
24 not?

25 A. Later --

1 Q. Yes.

2 A. -- yes.

3 Q. And in March of 2016, you attended a meeting at which were
4 present my clients, and among other people, the fire marshal
5 and one other person from his office, did you not?

6 A. Yes. That was a preliminary meeting to discuss permit
7 processing requirements for the terminal.

8 Q. And, basically, the fire marshal was telling Phil and Mark
9 what they needed to give him when they were ready to apply,
10 right?

11 A. That's correct. Information analysis and other -- other
12 plan details to make sure that they had what they needed to
13 plan-check the plans for the terminal.

14 Q. But it was way too early to make any kind of an
15 application or for the fire department to make any kind of a
16 decision, right?

17 A. Yes, but the applicant at his request was meeting with
18 departments in order to understand those application
19 requirements.

20 Q. It was very kind of you to arrange that. Thank you.

21 At this meeting the fire department did not say: No way,
22 no how to a coal terminal, did they?

23 A. That didn't come up. It was way too premature. This was
24 about the information needed in order to make that
25 determination.

CAPPIO - DIRECT EXAMINATION / FELDMAN

1 Q. Would you excuse me? They didn't say at this meeting:
2 We're not going to approve a coal terminal, did they?

3 A. No, they did not.

4 Q. And no one has ever told you that fires at coal terminals
5 were not common and not widespread, correct?

6 A. There is information in the record pertaining to fires at
7 coal terminals.

8 Q. But no one has ever told you that they were not common or
9 widespread, correct?

10 A. No.

11 Q. Am I correct?

12 A. That's correct.

13 Q. Thank you.

14 You recall a February City Council -- February 2016 City
15 Council meeting?

16 A. Yes.

17 Q. Did I say '16? Yes, I --

18 A. February of '16, yes.

19 Q. You have a very clear recollection of that meeting, do you
20 not?

21 A. I do.

22 Q. The Agenda Report for that meeting recites that -- oh, and
23 you wrote that Agenda Report? You and others, correct?

24 A. I -- I wrote it. There was a team formed for this issue,
25 and I had a hand in drafting it.

CAPPIO - DIRECT EXAMINATION / FELDMAN

1 Q. And you signed it?

2 A. I did sign it.

3 Q. And you informed the City Council that a supplemental
4 analysis and review of the record must be undertaken, correct?

5 A. That was my recommendation.

6 Q. And that was in connection with retaining ESA, right?

7 A. That's correct --

8 Q. And that was --

9 A. -- and the scope of work for ESA was included in that
10 report.

11 Q. Thank you. I'm sorry to interrupt you.

12 That was because the City staff did not have sufficient
13 expertise to advise the City with respect to whether there was
14 substantial evidence, correct?

15 A. What I wanted -- what I wanted was assistance with
16 expertise and review in order to make sure that the existing
17 record before us was complete and accurate and organized in a
18 way that we could use to present our options to the City
19 Council.

20 Q. May I see Deposition 212 -- withdraw.

21 The staff didn't have expertise to do that, right?

22 A. I -- I needed to have supplemental assistance in order to
23 accomplish what I wanted to with a review and possible
24 supplementation of the record.

25 **MR. FELDMAN:** Could we see, please, Page 213, Lines 1

1 through 3?

2 (Document displayed.)

3 **THE WITNESS:** Sorry.

4 **MR. FELDMAN:** No problem.

5 **BY MR. FELDMAN**

6 **Q.** Did you testify that that was because the staff didn't
7 have sufficient expertise to do that?

8 **A.** Yes.

9 **Q.** In a number of topical areas?

10 **A.** That's correct.

11 **Q.** The April 21st Agenda Report forwarded a revised scope of
12 work, did it not?

13 **A.** Yes.

14 **MR. FELDMAN:** May we see that, please? That's
15 Exhibit 593 at 0006.

16 (Document displayed.)

17 **THE WITNESS:** Is there a way to make this a little
18 larger?

19 **MR. FELDMAN:** Yes. You're going to get it in glowing
20 color in a moment.

21 **THE COURT:** It's also in the binder, if you prefer to
22 look in the binder.

23 **THE WITNESS:** Okay.

24 **MR. FELDMAN:** And could you highlight, please --
25 that's it.

CAPPIO - DIRECT EXAMINATION / FELDMAN

1 And could you make that bigger for Ms. Cappio.

2 (Document highlighted and enlarged.)

3 **BY MR. FELDMAN**

4 **Q.** Does that work?

5 **A.** Yes.

6 **Q.** At 0006 you wrote that the -- part of the scope of work:

7 "Will consider public comments as they may apply
8 to health and/or safety effects, regardless of whether
9 the mechanisms for these effects are fully understood
10 or documented in peer-reviewed scientific sources."

11 Right?

12 **A.** I believe that I did not write this. This was the scope
13 of work submitted by ESA.

14 **Q.** Thank you.

15 And you didn't like that because you thought that
16 substantial evidence required expert analysis that is based on
17 evidence and data so that the mechanisms are appropriately
18 documented and peer reviewed, correct?

19 **A.** That's my statement in my deposition.

20 **Q.** The retention of ESA was approved on May 3rd, correct?

21 **A.** That's right.

22 **Q.** And at the same time, Council member Kaplan simultaneously
23 requested a special City Council meeting on June 27th to
24 consider the ordinance and resolution?

25 **A.** It was either at that meeting or at the following City

1 Council rules committee meeting.

2 Q. And on February 24th -- for a June 27th meeting,
3 February -- Friday, June 24th would be the last day on which
4 you could publish materials for that meeting, right?

5 A. That's correct. Because it was a special meeting.

6 Q. And this request was made and driven by Council member
7 Kaplan?

8 A. Who requested the June 27th meeting date.

9 Q. She was one of the two City Council members who told you
10 back in the summer of 2015 that they wanted to ban coal, right?

11 MR. SIEGEL: Objection. Relevance. It goes to the
12 issues in their Motion in Limine as to predetermination as to
13 whether the City Council has --

14 THE COURT: Sustained.

15 MR. FELDMAN: This explains why that meeting was
16 scheduled as it was.

17 THE COURT: The objection is sustained.

18 BY MR. FELDMAN

19 Q. Do you remember that BAAQMD said they wanted to comment on
20 their report?

21 A. I'm sorry. Could you repeat that?

22 Q. Do you remember that BAAQMD said that they wanted to
23 comment on the ESA report?

24 A. They -- I remember them having conversations with us about
25 offering assistance in order to provide their expertise for the

1 scope of work and the work that we were going to do with ESA.

2 **MR. FELDMAN:** May we see Deposition 402/21 through
3 23?

4 (Document displayed.)

5 **THE COURT:** Did you say 421?

6 **MR. FELDMAN:** I said 402/21 through 23.

7 **THE COURT:** Thank you.

8 **BY MR. FELDMAN**

9 **Q.** Do you remember being asked:

10 **"QUESTION:** Do you remember that BAAQMD has said they
11 wanted to comment on the report?

12 **"ANSWER:** Yes."

13 Was that your testimony?

14 **A.** That's correct.

15 **Q.** You did not release drafts of the ESA report to any
16 Council members before Friday -- on -- prior to the Friday
17 before the Monday of the meeting?

18 **A.** No, I did not.

19 **Q.** And you didn't release any of that material that was
20 provided on Friday morning to the public before Friday morning,
21 correct?

22 **A.** Right. It all goes out relatively simultaneously.

23 **Q.** And the ordinance and resolution were not released to
24 anyone before that Friday, correct?

25 **A.** No.

1 Q. Am I correct?

2 A. That's correct.

3 Q. You knew that BAAQMD has to issue a permit before
4 facilities such as the terminal can operate?

5 A. I don't know the specific permits, but I know permits are
6 required in order to operate and build a facility like that.

7 Q. Is it correct that you understood that BAAQMD issues
8 permits to operate?

9 A. Again, I'm not familiar with the specific permits, but I
10 know that permits are required.

11 Q. Would you look, please, at Deposition 177/21 through 23.
12 (Document displayed.)

13 Q. Did you testify:

14 "QUESTION: Is it correct you understood that BAAQMD
15 issues permits to operate?

16 "ANSWER: Yes."

17 A. Yes.

18 Q. Was that your testimony?

19 A. Yes.

20 Q. You knew that BAAQMD would regulate the levels of PM2.5
21 and PM10, correct?

22 A. Yes.

23 Q. And you never reached a determination that BAAQMD's rules
24 and regulations were inadequate to ensure adequate air quality
25 with respect to the OBOT terminal, did you?

1 **A.** I think I testified that there was no reason for me to
2 believe that they would not administer the permits, but whether
3 those permits or regulations were sufficient to protect health
4 and safety or avoid impact to health and safety was another
5 matter, particularly with PM2.5.

6 **Q.** Would -- may I direct your attention to your deposition at
7 180/16 through 23.

8 **"QUESTION:** Did you, Claudia, ever reach a
9 determination that BAAQMD's rules and regulations were
10 inadequate to ensure adequate air quality with respect
11 to the OBOT terminal?

12 **"ANSWER:** No."

13 And you had no reason to think that BAAQMD would enforce
14 EPA standards in a way that would permit a substantial danger
15 to the people in the City of Oakland, correct?

16 **A.** Correct.

17 **Q.** And you have no answer to why you didn't simply recommend
18 to the City Council that it adopt an ordinance with PM limits
19 in it, correct?

20 **A.** I do not have an answer.

21 **Q.** To the best of your knowledge, there were no meetings
22 between CCIG and ESA?

23 **A.** No.

24 **Q.** You made no effort to find out about the health impacts on
25 the communities in which other coal and coke terminals were

1 present?

2 **A.** That was not part of the scope of work.

3 **Q.** You mean that the City Council didn't ask you to do that,
4 correct?

5 **A.** That's right.

6 **Q.** Do you remember that you asked a bunch of questions to my
7 clients at the end of September, and they wrote back written
8 answers?

9 **A.** At the end of September?

10 **Q.** September 2015. Sorry.

11 You asked them, for example, whether they would agree not
12 to ship by -- to ship anything other than bituminous coal.

13 Do you remember that?

14 **A.** I -- I don't recall that.

15 **Q.** Take a look, please, if we could see Exhibit 149.

16 (Document displayed.)

17 **Q.** Do you remember these answers to my clients?

18 **A.** I'm sorry. This letter -- I was getting my years mixed
19 up. Excuse me.

20 **Q.** It happens.

21 You remember this, right?

22 **A.** Yes, I do.

23 **Q.** And you remember that my clients agreed to be bound
24 contractually to implement Rule 1158 from the South Coast.

25 Do you remember that?

1 A. I -- I remember the representations in the letter.

2 Q. And, in fact, they said that the -- the Rule 1158 could be
3 put into a building permit; remember?

4 A. I don't remember offhand without reviewing the letter now.

5 Q. Okay. You remember this letter, though, right?

6 A. Yes, I do.

7 Q. And after this letter, do you have any recollection of
8 ever discussing with anyone Rule 1158?

9 A. Internally with the -- the ESA team and the City review
10 team. We did discuss that as a -- as a method by which we
11 would need to determine whether those regulations were adequate
12 to protect health and safety.

13 MR. FELDMAN: May I see Deposition 194/21 through 24.

14 (Document displayed)

15 Q. (As read)

16 "QUESTION: After the circulation of the September 28
17 list of questions, did you ever have any conversation
18 with anyone about Rule 1158?

19 "ANSWER: Not that I recall."

20 Was that your testimony?

21 A. That's my testimony.

22 Q. And is it correct, also, that you have no recollection of
23 ever discussing Rule 1158 with the City Council, either
24 specifically or generally?

25 A. That's correct.

1 Q. You never reached a determination that OSHA's rules and
2 regulations would be inadequate to ensure workers' safety at
3 the terminal, did you?

4 A. I myself did not.

5 Q. And the reason that there is a BAAQMD permit in the
6 exemption section of the ordinance was to make sure that public
7 health and safety were protected, correct?

8 A. That was to assure that there were -- there was an
9 acknowledgment of their regulatory authority.

10 Q. It was to make sure that public health and safety were
11 protected, correct?

12 MR. SIEGEL: Objection. Calls for a legal
13 conclusion.

14 THE COURT: Overruled.

15 A. I don't have that part of the ordinance in front of me,
16 so...

17 BY MR. FELDMAN

18 Q. You remember the part of the ordinance that exempted
19 manufacturing facilities?

20 A. Yes, I do.

21 Q. And it required, as a condition of being exempted, that
22 the manufacturing facility get a BAAQMD permit, right?

23 MR. SIEGEL: Objection. Calls for a legal conclusion
24 and misstates the ordinance.

25 THE COURT: I understand who is capable of making

CAPPIO - DIRECT EXAMINATION / FELDMAN

1 legal conclusions. And if they want to use their time on this,
2 they are perfectly free to do so.

3 **MR. SIEGEL:** Okay. Thank you, your Honor.

4 **A.** I do remember that they were required -- that those
5 exceptions were required to obtain BAAQMD permits.

6 **BY MR. FELDMAN**

7 **Q.** And that was to ensure public health and safety, correct?

8 **A.** It was to follow the law.

9 **Q.** Would you look, please, at your deposition at Line --

10 Page 87, Line 19 through 25 -- 26.

11 (Document displayed.)

12 **Q.** (As read)

13 **"QUESTION:** And why does -- why did the on-site
14 manufacturing facilities have to comply with those
15 emission standards in order to meet the exemption?

16 **"ANSWER:** Because they are a standard by which air
17 quality and pollution are measured in an effort to
18 make sure that public health and safety are
19 protected."

20 Was that your testimony?

21 **A.** That's my testimony.

22 **Q.** Thank you.

23 With respect to the table in the June 14 -- the June 24th
24 Agenda Report that portrays emission levels, did you tell the
25 City Council which numbers it should use or not use in that

CAPPIO - DIRECT EXAMINATION / FELDMAN

1 table in considering the ordinance?

2 A. No.

3 Q. You don't know if ESA did a dispersion analysis; that is,
4 seeing how far the PM gets transmitted, correct?

5 A. No.

6 Q. Am I correct?

7 A. That's correct.

8 Q. And would you look, please -- do you still have
9 Exhibit 149 in front of you?

10 A. I didn't. Yes.

11 (Document displayed.)

12 Q. Would you look please at 0008, which will come up on the
13 screen in a moment.

14 (Document displayed.)

15 Q. Would you look at the bottom, where there is a list of
16 products that were handled by Ecofab.

17 Do you see that list? Starts in --

18 A. Under subparagraph (c)?

19 Q. Yes, ma'am. It starts with "copper concentrate."

20 A. Yes.

21 Q. And that's a list of products, that you recall anyway,
22 that Ecofab handled with its -- or covered with its covers on
23 rail cars, right?

24 A. Yes.

25 Q. Did you ask ESA to determine whether or not any of -- any

CAPPIO - CROSS EXAMINATION / SIEGEL

1 of that was correct or true and whether it was similar to or
2 not similar to coal?

3 **A.** No, but we -- we did ask ESA to review the Ecofab product
4 and look at it in relationship to coal.

5 **Q.** But did you tell them to look at these products?

6 **A.** Not -- not that I recall.

7 **Q.** Nothing further.

8 **MR. FELDMAN:** Thank you, your Honor.

9 **CROSS EXAMINATION**

10 **BY MR. SIEGEL**

11 **Q.** Good morning, Ms. Cappio.

12 **A.** Good morning.

13 **Q.** Do you know whether the Bay Area Air Quality Management
14 District has a rule comparable to Rule 1158 from the South
15 Coast Air Quality Management District?

16 **A.** My knowledge, they do not.

17 **Q.** And whether the Bay Area Air Quality Management District
18 has a rule for coal and coke terminals? Do you know that?

19 **A.** My knowledge, they do not.

20 **Q.** Can you tell us whether the City evaluated the efficacy of
21 health and safety measures to which OBOT offered in that
22 October correspondence that you were recently looking at,
23 October 2015, whether the City evaluated the efficacy of those
24 measures which OBOT offered to agree to?

25 **A.** Yes, we did. That was part of our work, and it was

CAPPIO - CROSS EXAMINATION / SIEGEL

1 determined that those measures would be insufficient to
2 decrease or avoid danger to public health and safety. In
3 particular, given the interest in covering the coal cars, we
4 looked at that extensively and concluded that they were not in
5 use and were not likely to be used for coal.

6 **Q.** Can you tell us the -- the length of the agreements
7 between the City and OBOT, the Development Agreement in the
8 LDDA?

9 **A.** Yes. It's for 66 years each.

10 **Q.** And did that have any impact on the City's -- on your
11 analysis under Section 3.4.2 of the Development Agreement?

12 **A.** Yes. Quite frankly, that's a very long time, and I had to
13 take the long view in looking at impacts and the potential
14 disproportionate impacts on the West Oakland community given
15 the location of the terminal in Oakland -- in West Oakland.

16 **Q.** Can you tell us your understanding about whether the
17 National Fire Protection Association ratings govern the fire
18 safety of coal terminals?

19 **A.** It's my understanding that they do not.

20 **Q.** How often does the City Council face an extensive amount
21 of complex material to review in a short period of time before
22 a City Council meeting?

23 **MR. FELDMAN:** I object. Irrelevant, your Honor.

24 **THE COURT:** Overruled.

25 **A.** The City Council is quite often faced with having

CAPPIO - CROSS EXAMINATION / SIEGEL

1 extensive testimony and other reports submitted either right
2 before or during a public hearing.

3 **BY MR. SIEGEL**

4 **Q.** And those reports often contain extensive technical
5 information, is that true?

6 **A.** That's correct, or information rebutting the staff report
7 or other reports as part of the staff work.

8 **Q.** And if a -- can you tell us whether there are ever
9 requests for extension of time from a developer in such
10 circumstances when they have a development project before that,
11 the City Council?

12 **A.** Yes. The Council routinely grants these requests.

13 **Q.** In the months leading up to the June 27th, 2016 public
14 hearing, can you describe any efforts by the City to reach out
15 to OBOT to seek more information about their plans for storing
16 and handling coal at the terminal?

17 **A.** Yes. I recall an email early on in our work to both
18 Mr. McClure and Mr. Tagami in May of 2016.

19 **Q.** If you could take a look in your binder or at the screen
20 at what is Exhibit 264.

21 (Document displayed.)

22 **A.** Yes. This is the email.

23 **Q.** And what did you ask Mr. Tagami and Mr. McClure to
24 provide?

25 **A.** I was after two things. As we were looking at the

CAPPIO - CROSS EXAMINATION / SIEGEL

1 information needs for the report, for the June 27th meeting,
2 one was whether they had any additional information and other
3 detail on the actual Basis of Design or operation of the
4 terminal itself.

5 And the other one was some specific questions pertaining
6 to commodities that they had listed as part of their Basis of
7 Design.

8 Q. And how did -- did OBOT respond to this email?

9 A. OBOT did respond a week or so later in a letter.

10 Q. If I could turn your attention to Exhibit 265, please.
11 And I think you may need to look at Page 3 of this exhibit.

12 MR. SIEGEL: And, Mitch, if you could highlight the
13 question near the bottom of Page 3?

14 (Document displayed.)

15 BY MR. SIEGEL

16 Q. Is this the letter to which you just referred?

17 A. Yes.

18 Q. And so did -- and if you could flip to the second page of
19 the letter, which is Exhibit 4 near the top. Did OBOT respond
20 to any of your inquiries regarding the first question?

21 A. No. We received no additional information.

22 Q. And what about your second question with respect to the
23 types of commodities. Did OBOT provide you any information
24 with respect to that? And that's shown in the bottom third of
25 the page.

CAPPIO - CROSS EXAMINATION / SIEGEL

1 **A.** Right. I did not receive any -- any other additional
2 information about the specific -- or answers about the
3 questions I had asked.

4 **Q.** Thank you.

5 When the City Council has a matter regarding a development
6 project before it, can you tell us how much time that Council
7 typically provides to the developer compared to how much it is
8 typically provided to members of the public?

9 **A.** Sure. A project proponent or developer will often get 10,
10 15 or 20 minutes to present their case along with the issues at
11 a Council meeting.

12 **Q.** And how about members of the public?

13 **A.** Members -- individual members of the public, are relegated
14 to one to two minutes each.

15 **Q.** And could you tell us whether you attended the City
16 Council meeting on June 27, 2016?

17 **A.** I did attend the Council meeting.

18 **Q.** Do you recall whether Mr. Tagami or Mr. McClure attended?

19 **A.** I recollect that neither Mr. Tagami or Mr. McClure
20 attended that meeting.

21 **Q.** I'd like to briefly turn your attention to some of the
22 comments submitted by the City with respect to the subject
23 terminal.

24 And I think the first is Exhibit 657. It should be in the
25 same binder.

CAPPIO - CROSS EXAMINATION / SIEGEL

(Document displayed.)

A. Yes.

Q. And if you flip through this, and particularly I'd like to draw your attention to, as you're flipping through it, to Page 21 of the exhibit. And then Page 22.

A. Yes.

Q. If you could tell the Court whether this document, generally, the larger document looks familiar?

A. Yes. This -- all these documents look familiar because they were part of the submitted testimony for the -- at one of the various public hearings we had on the coal terminal.

Q. And do you recognize this one at Page 22 here?

A. I do. It's the comments of Dr. Bart Ostro, who is a former Chief of Air Pollution Epidemiology at the California EPA. And this particularly stood out as a number of others because Mr. Ostro was a credentialed professional in this field, and his testimony may -- had made our case stronger with regard to substantial evidence.

Q. If I could turn your attention now. I think this is the next binder, Binder Number 2. If you could take a look at Exhibit 660 there.

(Document displayed.)

A. This is --

Q. Does this document look familiar? Can you tell us whether you recognize it?

CAPPIO - CROSS EXAMINATION / SIEGEL

1 **A.** I just looked at it. This document does look familiar
2 because, again, it was submitted as testimony at the
3 September 2015 public hearing. And, again, it was from a
4 recognized authority in health -- health impacts, and it was
5 from the Alameda County Health Care Services Agency, a
6 Dr. Davis, pertaining to the impacts of coal.

7 **Q.** All right. Just a couple more here. How about
8 Exhibit 661?

9 (Document displayed.)

10 **Q.** Can you identify this document for us?

11 **A.** I recognize this because it was specifically addressed to
12 me, and it is a memo from Lora Jo Foo pertaining to the covers
13 for rail transport of coal. And I remember reviewing this
14 particularly because we were determining the efficacy of coal
15 covers during that period.

16 **Q.** One just more exhibit here briefly, Exhibit 1069.

17 (Document displayed.)

18 **Q.** If you could look at that and let us know if you recognize
19 it?

20 **A.** Yes. Again, particularly since I communicated with this
21 panel -- members of this panel during the months of May and
22 June because they were -- they let me know they were preparing
23 a report on the coal -- on the public health impacts of coal.
24 And I communicated with them a couple of times in terms of the
25 timing of submittal of this report.

CAPPIO - REDIRECT EXAMINATION / FELDMAN

1 So I do remember it being part of the public record for
2 the June 27th hearing.

3 **Q.** And does your -- does your memory of this record have
4 anything to do also with any of the -- the authorship of it?

5 **A.** It was, again, a panel of public health experts from
6 UC Berkeley.

7 **MR. SIEGEL:** All right. Thank you.

8 No further questions.

9 **REDIRECT EXAMINATION**

10 **BY MR. FELDMAN**

11 **Q.** Ma'am, at the June 27th meeting, there was, in fact, a
12 representative from OBOT, was there not?

13 I remind you there was a transcript -- there is now a
14 transcript. There was a representative, wasn't there?

15 **A.** Again, it's my recollection -- there was a lot of people
16 in the Council chambers, and I did not see a representative
17 from OBOT.

18 **Q.** Do you remember the name Greg McConnell?

19 **A.** Yes.

20 **Q.** And what did he say?

21 **A.** I don't recall.

22 **MR. FELDMAN:** Nothing further.

23 **THE COURT:** All right. Thank you very much.

24 **THE WITNESS:** You're welcome.

25 (Witness excused.)

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1 **THE COURT:** All right. Anything else from
2 plaintiffs?

3 **MS. SHAW:** Your Honor, subject to the Court's final
4 determination on exhibits, which I understand is going to be
5 with post-trial briefing, Plaintiff rests.

6 **THE COURT:** All right.
7 Defendants?

8 **MR. AKER:** Your Honor, we would call to the witness
9 stand Dr. Ran Sahu.

10 **MR. FELDMAN:** Before the witness takes the stand, I
11 have an matter to raise with the Court about that.

12 **THE COURT:** Sure.

13 **MR. FELDMAN:** We were given quite a number of
14 documents for this witness last night for the first time. We
15 have had the documents. We were told that he would be using
16 them for the first time. And we, therefore, have an objection
17 both as to timeliness --

18 **THE COURT:** Doctor, you can go ahead and have a seat.
19 I need to have a discussion with Mr. Feldman about something
20 before you take the oath.

21 **MR. FELDMAN:** .. both with respect to the timeliness,
22 because I think your rules require 48 hours.

23 But perhaps more significantly with respect to the fact
24 that these materials were not in any way identified in either
25 of his expert reports.

1 I can describe to you what they are.

2 **THE COURT:** Sure.

3 **MR. FELDMAN:** And then there is -- related to that is
4 that I expect the witness will attempt to testify based on the
5 identification of these documents about threshold friction
6 velocity, which is nothing in either of his reports about. So
7 on that basis I would move to preclude any testimony about
8 threshold friction velocity and the following exhibits: 1085,
9 which is the Moleski article; and 982, which is the reference
10 for the uncrusted coal pile; and 1069, which is the public
11 health document that -- public health, whatever, panel that you
12 just saw in Ms. Cappio's testimony.

13 None of those documents were in any way addressed in
14 Dr. Sahu's testimony. So I would object to that.

15 **THE COURT:** So you're saying that neither in his
16 report did he disclose an opinion about the threshold friction
17 velocity, nor did he disclose the use of these documents in his
18 report.

19 **MR. FELDMAN:** That's correct.

20 **THE COURT:** And did he testify in his deposition on
21 that topic?

22 **MR. FELDMAN:** He did, and I'll explain it to you.

23 **THE COURT:** Okay.

24 **MR. FELDMAN:** I'll tell you exactly what happened.
25 He submitted a report. The report has spreadsheets that mirror

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1 the ESA spreadsheets. And they have the exact same, in our
2 view, incorrect value for threshold friction velocity. There
3 is no description in either of his reports about why that is.
4 That is, he doesn't say: I chose this threshold friction
5 velocity for this, that or the other reason.

6 There are discussions of other values; that is, you know,
7 moisture and other things, which we're not even interested in
8 now.

9 But with respect to threshold friction velocity, there is
10 no statement about that at all in either of his reports.

11 **THE COURT:** When you say "either of his reports," did
12 he do an initial report and a rebuttal report?

13 **MR. FELDMAN:** Yes. Exactly.

14 **THE COURT:** Okay.

15 **MR. FELDMAN:** And actually, he did a supplemental
16 report which changed some numbers, but I don't think anyone
17 would suggest that that's material to this motion by me. So
18 I'm going to continue to refer to two and omit the supplemental
19 report, which came out two days or so after his opening report.

20 **THE COURT:** Okay.

21 **MR. FELDMAN:** So in the opening report and in the
22 rebuttal report, there is no discussion of threshold friction
23 velocity. The only reference to threshold friction velocity is
24 a spreadsheet very much like the one that you've seen that has
25 the same identical -- the same -- not the same identical -- the

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1 identical value for threshold friction velocity that was used
2 to generate the -- what we say is the incorrect number in
3 Table 5-7.

4 So there is a -- the report contains verbal descriptions
5 of the rationale for various values, none of which is in either
6 report threshold friction velocity.

7 I may be wrong, but am I clear?

8 **THE COURT:** I understand what you're saying.

9 **MR. FELDMAN:** Okay. And then with respect to --

10 **THE COURT:** Are you -- before -- are you going to
11 turn away from threshold friction velocity and go to another
12 topic?

13 **MR. FELDMAN:** No, I was going to --

14 **THE COURT:** Okay. Go ahead.

15 **MR. FELDMAN:** With respect to threshold friction
16 velocity -- oh, I do owe you an answer to your question about
17 the deposition.

18 With respect to threshold friction velocity, Exhibit 982
19 is one of the references that is cited in AP-42, that table
20 that has uncrusted coal pile and fine coal powder. That's one
21 of the references. And 1085 is the Moleski reference, which
22 you've heard testimony we got from Mr. Moleski. Those two
23 articles relate to threshold friction velocity, neither was in
24 the witness's report.

25 Now, you asked me a question about his deposition. At his

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1 deposition I -- I did verify, if you will, that he has offered
2 no opinions about threshold friction velocity in his reports.
3 That said, Page 201, 7 through 10 of his deposition. And he --
4 which I'm happy to provide to your Honor.

5 And he took the occasion to then start talking about
6 threshold friction velocity, but I was attempting to determine
7 whether or not he had opinions -- excuse me -- whether he had
8 expressed opinions in his reports, which I think is the
9 touchstone for this process, not whether he can babble about it
10 in a deposition.

11 So with respect to the reports, there is no question that
12 the only reference is in a spreadsheet. There is a verbal
13 description of other values, not threshold friction velocity.
14 There is no reference to these two articles. And the
15 references in the deposition were my attempt by and large to
16 find out whether or not he had expressed an opinion in the
17 reports.

18 **THE COURT:** Okay.

19 **MR. AKER:** Well, perhaps Mr. Feldman's memory is
20 different than mine, but I do know, first of all, he obviously
21 had to use threshold friction velocity to determine -- to
22 review the ESA calculations and determine whether they were
23 correct, which was his opening report.

24 **THE COURT:** So, yeah. That's one of the things I was
25 going to ask, is what were the opinions that he offered in his

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1 opening report and in his rebuttal report.

2 **MR. AKER:** His opening report, essentially, looking
3 at the ESA report, the calculations and verifying were they
4 correct, were they not correct. In some cases he agreed; in
5 some cases he disagreed.

6 But one of the -- as your Honor probably already knows,
7 that threshold friction velocity is a key component of that,
8 and he used that to compute -- to verify the ESA calculations.

9 I'm 90 percent sure, if not more, that --

10 **THE COURT:** Well, why don't you show me -- why don't
11 you show me his reports and his deposition testimony.

12 Why don't you hand those things up to me?

13 **MR. AKER:** We have his reports. I'm not sure we have
14 his deposition testimony here, your Honor. And it would take
15 some time to actually go through and figure out where these
16 references were.

17 If I could just continue? He did address it in his
18 rebuttal --

19 **THE COURT:** Hold on. I want to see -- before you
20 talk more about his reports and his deposition testimony, I
21 want to have his reports and his deposition testimony in front
22 of me.

23 **MR. FELDMAN:** May I hand this to your Clerk?

24 (Whereupon binder was tendered to the Court.)

25 **THE COURT:** Thank you.

1 **MR. FELDMAN:** This is a heavy binder.

2 (Whereupon binder was tendered to the Court.)

3 **MR. FELDMAN:** The opening report is at 499, your
4 Honor.

5 **THE COURT:** Okay. Hold on one second here.

6 (Brief pause.)

7 **THE COURT:** Okay. Mr. Feldman, which tab did you say
8 the expert report is --

9 **MR. FELDMAN:** The opening report is at 499.

10 **THE COURT:** Uh-huh.

11 **MR. FELDMAN:** And I can walk you through it, if you'd
12 like.

13 **THE COURT:** That's okay. At least for the moment.
14 Maybe I can hear from Mr. Aker, now that I have it.

15 **MR. AKER:** Sure. So I'm -- I'm reading from Page 9
16 of his rebuttal report.

17 **THE COURT:** Okay. Which tab is that again?

18 **MR. AKER:** And that is -- it's 501, Trial
19 Exhibit 501.

20 **THE COURT:** Okay.

21 **MR. AKER:** And I would direct your Honor's attention
22 to Page 9 at the bottom.

23 (Document displayed.)

24 **MR. AKER:** Where Mr. Sahu -- Dr. Sahu says on
25 Page 541 of his report:

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1 "Relating to the emissions of coal dust from rail
2 cars, Mr. Chinkin makes the following statements
3 without any technical support whatsoever."

4 And then he talks about the emission factor chosen by ESA
5 he thinks is wrong.

6 And if we go to the next page, he talks about erodable
7 materials.

8 Let's see.

9 (Brief pause.)

10 **MR. AKER:** Actually, your Honor, I'm not finding it
11 on a quick read-through of the opening report, but as the
12 witness will testify, that --

13 **THE COURT:** That begs the question.

14 **MR. AKER:** -- threshold friction velocity is an
15 important...

16 But I would also point out he was asked about it
17 extensively in his deposition. He talked about --

18 **THE COURT:** Why don't we start with the reports?

19 **MR. AKER:** Yeah.

20 **THE COURT:** Can you give me an argument for, again,
21 the basic rule, which is subject to exception sometimes. The
22 basic rule is that if an expert doesn't disclose an opinion in
23 a report, the expert cannot provide that opinion at trial.

24 So do you want to explain to me how his report includes or
25 encompasses or necessarily involves an opinion about the -- I

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1 always forget the term -- threshold friction velocity.

2 **MR. AKER:** Friction velocity, yeah.

3 Well, it was an integral part -- I mean, he has to apply a
4 threshold friction velocity in order to verify the ESA
5 calculations. That's part of his --

6 **THE COURT:** So tell me what was his -- what was the
7 opinion he was offering in his initial report?

8 **MR. AKER:** That the ESA calculations were correct.

9 **THE COURT:** Okay.

10 **MR. AKER:** And that included all elements of what he
11 needed to -- to get to the calculations.

12 **THE COURT:** Okay. So -- and -- so he -- so his -- so
13 his opinion -- here, let me just flip through his report.

14 **MR. SIEGEL:** Uh-huh.

15 **THE COURT:** Usually there is a summary in the front.
16 Okay.

17 (Brief pause.)

18 **MR. AKER:** So, your Honor, I would say it's --

19 **THE COURT:** Give me one second.

20 **MR. AKER:** Sure.

21 (Brief pause.)

22 **MR. AKER:** Your Honor, I can -- if the Court --

23 **THE COURT:** Just give me one second.

24 **MR. AKER:** Sure.

25 (Brief pause.)

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1 **THE COURT:** Okay. Sorry. Go ahead.

2 **MR. AKER:** Yeah. If the Court would go to the page
3 at the bottom that's TX-044. It's kind of toward the end of
4 the report.

5 **MR. FELDMAN:** Which report now, please? What
6 exhibit?

7 **MR. AKER:** This is his opening report, Exhibit 499.

8 **MR. FELDMAN:** Okay.

9 **THE COURT:** Okay.

10 **MR. AKER:** And so what these are -- and the witness
11 can explain later -- but these are sort of the details of his
12 calculation of the -- the emission amounts. And as you'll see,
13 it's very small writing. But right dead center in the middle
14 of the page it says: Friction velocity, meters per second,
15 threshold friction velocity, meters per second.

16 And you'll see just to the right of that 0.54, AP-42,
17 Chapter 13.2.5 for fine coal dust on concrete pad from an
18 Eastern power plant. And then he has got the roughness height
19 is next.

20 But so just that shows you that -- that elements of his
21 calculations was disclosed in his report, and he was asked
22 about it extensively in his deposition. So there were no
23 surprises.

24 The plaintiffs knew that this was an essential part of his
25 opinion, and it -- he was asked about it at length. And why

1 did you choose this value? Why didn't you choose uncrusted
2 coal pile?

3 **MR. FELDMAN:** May I be heard now?

4 **THE COURT:** Yes.

5 **MR. FELDMAN:** I have no objection, although -- well,
6 I shouldn't say it that way. There is no doubt that the
7 witness used 0.54, exactly as ESA did. And the witness will
8 testify, if he is consistent with his deposition, that he took
9 their spreadsheets and used them and only made certain changes.

10 And he explains some of the changes, and he explained some
11 of the non-changes in his report and in his deposition.

12 But in his deposition, I asked him:

13 **"QUESTION:** And have you offered any opinion about
14 what the correct threshold friction velocity should
15 be?

16 **"ANSWER:** I could not, because I don't have details on
17 the coal."

18 And I did ask him a number of questions about threshold
19 friction velocity in an effort, A, to protect myself; and, B,
20 to find out what was actually happening in this report. But
21 there is no place in this opinion -- and I will walk you
22 through every line if you are so inclined -- where I could have
23 found out what his -- his position would be on the correct
24 threshold friction velocity.

25 And that's exactly why I'm making this motion.

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1 **MR. AKER:** Your Honor, the purpose of this rule
2 about -- that your Honor cited is so that the other side in
3 litigation is not surprised by something that they had no
4 reason to believe the expert was going to talk about. It's in
5 his report. And if -- if -- to the extent anyone felt that,
6 well, you know, it's -- it's a line item in the spreadsheet
7 here. They had ample opportunity, and actually did take the
8 opportunity to ask him questions about it in his deposition.

9 **THE COURT:** All right. I understand. I understand
10 the issue. And what -- I think it's a close question. But I
11 am going to -- but, you know, I think because he originally
12 offered an opinion about whether ESA's calculations were
13 correct or not, and part of ESA's calculations included this
14 assumption about threshold velocity, I think that there is at
15 least a reasonable argument that it's included in the report
16 and you combine that with the fact that Mr. Feldman
17 cross-examined him about it extensively -- asked him about it
18 extensively at his deposition justifies his testimony about it
19 here.

20 I will also say that given the answer that he gave on
21 Page 201, Lines 9 through 10, that -- I mean -- that, you
22 know -- he seems to have -- your expert seems to perhaps have a
23 credibility problem on that issue. But I think that probably
24 goes better to weight than admissibility.

25 So he can testify about that.

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1 **MR. AKER:** Sure. Thank you.

2 **MR. FELDMAN:** May I be heard?

3 **THE COURT:** No. Let's proceed.

4 **MR. FELDMAN:** No, no. I'm sorry. This is with
5 respect to the articles.

6 **THE COURT:** Oh.

7 **MR. FELDMAN:** They were not anywhere in his report or
8 his testimony. So the two articles that I've referred to
9 should not be permitted, even under your Honor's analysis.

10 **THE COURT:** And when is the first time that it was
11 disclosed to you that --

12 **MR. FELDMAN:** Last night at 7:30.

13 **THE COURT:** -- that he would use -- that his -- he
14 would use these articles?

15 **MR. FELDMAN:** Last night at 7:30. I may be off on
16 the time.

17 **THE COURT:** I think that's a fair point.

18 **MR. AKER:** Can I respond to that?

19 **THE COURT:** Yes.

20 **MR. AKER:** So these articles are part of 13.2.5.
21 And, in fact, one of them, Mr. Chinkin referred to yesterday.
22 And if you -- I'm looking at this AP-42, you know --

23 **THE COURT:** Is there any indication anywhere in his
24 testimony, deposition testimony or his reports, that he gave
25 consideration to these articles?

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1 **MR. AKER:** The --

2 **THE COURT:** Was he -- was he questioned about the --
3 did these articles come up in the deposition testimony?

4 **MR. FELDMAN:** They did not.

5 **MR. AKER:** I really -- I can't recall.

6 **THE COURT:** He is not -- he is not permitted to
7 testify about these articles.

8 **MR. AKER:** Well, if I could add, your Honor, that
9 these are the articles that Mr. Chinkin referred to in his
10 testimony yesterday. An expert is entitled to offer an
11 opinion -- who is in court is entitled to offer opinions about
12 facts he learns during the -- from witnesses who have testified
13 at trial.

14 He is -- I think we are entitled to rebut Mr. Chinkin's
15 testimony that these two articles apply. The Moleski article
16 is one he talked about.

17 **THE COURT:** Did Chinkin -- did Chinkin --

18 **MR. FELDMAN:** Yes.

19 **THE COURT:** -- include these articles in his expert
20 report?

21 **MR. FELDMAN:** Yes.

22 **MR. AKER:** I don't recall that, but --

23 **THE COURT:** And did he testify about those articles?

24 **MR. FELDMAN:** He wasn't asked in his deposition.

25 He --

1 **MR. AKER:** Oh.

2 **MR. FELDMAN:** Excuse me.

3 They were both in his report. The saga of us contacting
4 Moleski is in Mr. Chinkin's reports.

5 **THE COURT:** Can I see Chinkin's report? Can you show
6 that to me?

7 **MR. FELDMAN:** That, I don't have handy.

8 **THE COURT:** One of your team members, no doubt, has
9 that handy.

10 **MR. FELDMAN:** But I remember that.

11 **THE COURT:** Okay. But I would like to just take a
12 look that.

13 (Brief pause.)

14 **MR. FELDMAN:** While they are looking for it, there
15 was also no reference by the witness in his reports to the
16 Public Health Panel report that -- last night we found out that
17 he is proposing to testify about.

18 **THE COURT:** We will get to that in a second.

19 (Brief pause.)

20 **MR. FELDMAN:** May I hand this to your clerk?

21 **THE COURT:** Please.

22 **MR. FELDMAN:** This would be in 474.006 in the long
23 paragraph that begins "In my October 6 report."

24 (Whereupon document was tendered to the Court.)

25 **THE COURT:** Okay. So the expert can testify about

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1 why he used fine coal dust on a concrete pad. He cannot
2 testify about these articles or to rebut the expert's testimony
3 about these articles.

4 That's the ruling. Proceed.

5 **MR. AKER:** Thank you, your Honor.

6 **MR. FELDMAN:** With respect to the Public Health
7 Panel, there was nothing in his report about that -- either of
8 his reports about that either. And this -- last night at 7:30
9 is when we learned for the first time that there was proposed
10 testimony from him about that.

11 **THE COURT:** Okay.

12 **MR. AKER:** I'm not sure we're going to ask him about
13 that.

14 **THE COURT:** Okay.

15 **MR. FELDMAN:** Good.

16 **MR. AKER:** Other witnesses have testified about it
17 already.

18 **THE COURT:** Okay. Then it sounds like that won't be
19 a topic of his testimony.

20 **MR. FELDMAN:** Thank you.

21 **THE COURT:** You can proceed.

22 **MR. SIEGEL:** Thank you, your Honor.

23 **RANAJIT SAHU,**

24 called as a witness for the Defendant herein, having been duly
25 sworn, testified as follows:

SAHU - DIRECT EXAMINATION / AKER

1 **THE WITNESS:** I do.

2 **THE CLERK:** Thank you. Please be seated.

3 And for the record, please state your first and last name
4 and spell both of them.

5 **THE WITNESS:** My first name is Ranajit, spelled
6 R-A-N-A-J-I-T. Last name is Sahu, S-A-H-U.

7 **THE CLERK:** Thank you.

8 **DIRECT EXAMINATION**

9 **BY MR. AKER**

10 **Q.** Good morning, Dr. Sahu.

11 **A.** Good morning.

12 **Q.** Could you state for the Court your present occupation.

13 **A.** I'm an environmental consultant. I do engineering,
14 environmental and energy consulting for a variety of clients.

15 **Q.** Okay. And how long have you been doing that kind of work?

16 **A.** For the last 17 years on my own, and about 10 years prior
17 to that as part of other employers.

18 **Q.** So all together?

19 **A.** About 27 years.

20 **Q.** 27, -8 years.

21 And is your focus on any type of pollutants, air
22 pollution, water?

23 **A.** Substantially air pollution, but I also do work in water
24 as well as waste and related -- other media.

25 **Q.** Okay. I wonder if you could just describe your assignment

1 in this particular case, this project.

2 **A.** Sure. When I was contacted by counsel, my understanding
3 was, and I was told to review the ESA report and the --
4 obviously, the project descriptions and discussions that were
5 part of their report. It was then later on to review other
6 expert reports from the plaintiff's side and then -- those are
7 the two main sort of assignments, and other sub-assignments
8 flow from that.

9 **Q.** Okay. And did you also review OBOT's expert reports and
10 respond to those?

11 **A.** Yes. That's what I meant by the -- the plaintiff's --
12 defendant's -- plaintiff's expert reports or the OBOT reports.

13 **Q.** I wonder if you could describe your education for me?

14 **A.** Very briefly, I have a mechanical engineering degree from
15 one of the Indian institutes of technology.

16 And then I came here to the U.S. in '83 and got my
17 master's and my Ph.D. dealing with coal combustion primarily
18 and air pollution, from the Cal Tech -- from California
19 Institute of Technology in Pasadena.

20 **Q.** Okay. And so you're an engineer, is that right?

21 **A.** Yes. My degrees are in mechanical engineering, basically.

22 **Q.** And what -- why is that important in this particular
23 matter?

24 **A.** Well, we're talking about a facility that obviously has to
25 be designed, engineered and built, and the air pollution

1 calculations and ultimately the issues that -- that are
2 important here, which flow from those air pollution
3 calculations and how pollutants are generated and dispersed and
4 ultimately either pose or don't pose harm flow from the basic
5 engineering of what the facility is going to be.

6 **THE COURT:** Could I ask -- there was one part I
7 didn't hear. What did you say your Ph.D. was in?

8 **THE WITNESS:** My Ph.D., your Honor, was in the
9 combustion of coal chards, which is part of the coal that is
10 left when it's burning. That was the narrow issue.

11 But it was driven by air pollution from coal combustion,
12 so that was the --

13 (Court reporter clarification.)

14 **THE WITNESS:** ...from coal combustion.

15 **THE COURT:** Great. Thank you.

16 **BY MR. AKER**

17 **Q.** Okay. I have here that your Ph.D. was in mechanical
18 engineering?

19 **A.** Yes.

20 **Q.** Okay.

21 **A.** And that was the subject matter of the dissertation.

22 **Q.** Your thesis or dissertation, okay.

23 **A.** Yes.

24 **Q.** And so if you could just elaborate a little bit on what
25 kind of things you did between 1990 and 2000 while you worked

1 for private firms.

2 **A.** From 1990 to 2000, I was with a series of private firms.

3 I did design work. I did -- but primarily consulting work.

4 The firm had a large environmental consulting practice. I did

5 all aspects of air pollution consulting, which includes

6 developing emission inventories and a lot of permitting work.

7 My work was primarily in the South Coast AQMD. And I'm a

8 certified permitting professional in the South Coast, so I did

9 a lot of permitting work.

10 I also managed other environmental professionals and I did

11 a fair amount of dispersion modeling --

12 (Court reporter clarification.)

13 **Q.** Please slow down.

14 **A.** I did dispersion modeling and risk assessments as part of

15 my work in that first decade when I was with Parsons.

16 **Q.** Okay. And what about from 2000 to the present when you

17 had been sort of on your own?

18 **A.** The main change was that I was on my own. And I had a

19 different client base, but for the first five or six years, I

20 continued to do similar work. I also started to do work for

21 the Department of Justice and the EPA and some expert work

22 dealing with coal-fired power plants.

23 And along with that, towards the latter part of the

24 decade, I also began to do a fair amount of work in other

25 media, the water and waste, and the air quality work continued

1 but then added to do work in other areas.

2 **Q.** Would you please talk a little bit more about your
3 permitting experience. You mentioned that.

4 **A.** Well, that began roughly when I joined Parsons in 1990,
5 and it essentially has continued through. Assisting clients to
6 get permits was a lot of that in the first decade with Parsons.
7 Reviewing permit applications and providing comments on public
8 permit applications and occasionally getting permit
9 applications, that continues through today.

10 I am, as I mentioned earlier, a -- the South Coast AQMD,
11 their staff are so busy that several years ago they began a
12 program where they -- it's a certification program for folks
13 that want to avail themselves of services of consultants if
14 they wanted to get permits.

15 And I was one of the certified consultants. I still am.
16 It simply means that when people come to the South Coast and
17 ask to get permits they say: Well, go talk to these people.
18 They can help you. That type of thing.

19 **Q.** Okay. And have you had experience in assisting people
20 applying for permits with the Bay Area Air Quality Management
21 District?

22 **A.** In -- when I was at Parsons in -- between 1990 and 2000,
23 we had an office actually here in Alameda, which I managed for
24 part of the time out of Pasadena. And we had many clients in
25 the Bay Area that we assisted in getting permits.

1 Q. Okay.

2 MR. FELDMAN: Your Honor, excuse me. I move to
3 strike. The question was whether he had experience, and I
4 don't think he answered that question.

5 THE COURT: That's true. There is no need to strike
6 anything. Can you --

7 MR. AKER: Sure.

8 BY MR. AKER

9 Q. Can you elaborate on that response to Mr. Feldman's
10 objection?

11 A. I did assist myself personally in many of those permit
12 applications.

13 Q. Okay. So you met with BAAQMD staff and things like that?

14 A. Only on a couple of occasions. This was specifically
15 dealing with a cement plant. I remember meeting with BAAQMD
16 staff.

17 Other instances, it was preparing permit applications,
18 reviewing emission inventories, and modeling as part of permit
19 applications --

20 (Court reporter clarification.)

21 A. ...preparing emission inventories and the other aspects of
22 permit applications, like modeling, conducted by other folks
23 who worked under my supervision.

24 So meetings, I just recall one or two.

25 MR. FELDMAN: I apologize for interrupting. May I

1 please have the deposition back?

2 **THE COURT:** Sure.

3 **MR. FELDMAN:** Never mind. I've got a copy.

4 **THE COURT:** Okay.

5 **MR. FELDMAN:** Sorry to interrupt.

6 **THE COURT:** No problem.

7 **BY MR. AKER**

8 **Q.** How many permit applications do you think you handled with
9 BAAQMD?

10 **A.** I would say between 10 and 20.

11 **Q.** Okay. And then you -- since then you have been doing a
12 lot of work with the South Coast Air Quality Management
13 District, is that correct?

14 **A.** South Coast AQMD, ever since I lived there, work is fairly
15 steady. But I was doing a lot more intense work at South Coast
16 Air Quality Management District when I was with Parsons. I
17 don't do as much with them now other than occasionally
18 assisting clients who are referred to me through that certified
19 permitting program that I mentioned earlier.

20 **Q.** Could you give the Court some idea of the types of clients
21 you've worked with over the years. And I'm thinking about
22 broad categories, like government or private industry,
23 environmental groups, that kind of thing.

24 **A.** It's -- over the years, it has involved the three broad
25 categories into which I look at my clients, which is private

1 industrial clients, government entities, including EPA or
2 states or other -- other government entities, cities. And then
3 lastly would be non-governmental organizations, environmental
4 groups, public groups.

5 **Q.** I think you alluded to this, but some of your experience
6 has involved investigation or analysis of coal operations?

7 **A.** Yes. A substantial portion of my work, certainly when I
8 have been on my own in the last 17 years, has been dealing with
9 coal-fired power plants, coal terminals, coal storage at
10 coal-fired power plants, and, of course, combustion issues and
11 emissions and pollutants associated with handling and
12 combusting of coal.

13 **Q.** Okay. And have you had experience in your career with
14 coal dust or other particulate matter?

15 **A.** I have.

16 **Q.** Briefly describe it.

17 **A.** Yeah. Whether it's in a power plant or whether it's in a
18 terminal, and I've dealt with both, obviously you're not going
19 to burn coal in a coal-fired power plant without first bringing
20 it to the power plant and handling it there: Storing,
21 conveying, crushing, milling, grinding. And all of those
22 involve a fugitive emissions potentially and how they are
23 treated.

24 And at terminals like the one proposed here, obviously the
25 handling is the more important part as opposed to the

1 combustion.

2 Q. Okay. And you mentioned briefly air dispersion modeling.
3 Have you actually done that kind of work?

4 A. Yes, I did.

5 Q. Just briefly describe that.

6 A. I did air dispersion modeling work before there were --
7 before there were models.

8 It's interesting to me that people think of air dispersion
9 modeling as beginning with dispersion models. Dispersion of
10 air pollutants has been an issue, academically and otherwise,
11 and I've taught for about 20 years.

12 So I've not only done but also taught air dispersion
13 modeling, in the early days by hand, to develop estimates of
14 concentrations that would come from releases.

15 And later on using the kind of models that EPA has
16 essentially approved for doing air dispersion modeling. I
17 did -- most recent air dispersion model I did for a client was
18 just about a month ago on a different matter.

19 Q. Okay. I want to turn now to the calculation -- your
20 review of the ESA report and the calculations of the emissions
21 from the OBOT facility.

22 A. Sure.

23 Q. Can you describe for the Court generally what you did to
24 review the ESA calculations about PM2.5.

25 A. Well, I began with the ESA report, and I also looked at

1 their scope of what they were asked to do. And I asked
2 counsel, and I got as much or a fair amount of the background
3 documents that ESA has reviewed to prepare their report. And
4 as -- as I went to the report, I wanted to develop an
5 understanding of the context of the report, the setting, if you
6 will. That's a very standard part of doing this type of review
7 work. Where is it located? What is the project about?
8 What -- what is its goals and what is the surrounding area?
9 What sort of monitoring data are available? What sort of
10 meteorological data are available? Those things go into what I
11 consider as air quality setting information, the context
12 information.

13 So that -- and there were many documents in the record
14 dealing with parts of that, including documents that ESA has
15 reviewed and mentioned.

16 So my job was to verify the ESA work. So I went through
17 what they had gone through.

18 I also has a couple of brief discussions with ESA staff as
19 I was going through the review. And then I -- I made
20 adjustments as I deemed appropriate to certain aspects of their
21 calculations, what they had done. I -- I did begin with their
22 calculations since they had organized the calculations based on
23 the activity that were proposed in a certain way. I didn't see
24 any reason to revise that.

25 And then I -- on activity by activity, I decided where I

1 agreed with them. And those I did not discuss in my expert
2 report because they were what ESA has used. I had no reason to
3 go and elaborate on things where I agreed with them.

4 In areas where I disagreed with them, I substituted my
5 judgment for what they had done and made some changes, and
6 those I do discuss in my expert report.

7 Q. Okay.

8 A. That's what I broadly did.

9 Q. We'll go through those, the changes individually in just a
10 few minutes.

11 A. Okay.

12 Q. Did you -- you said you looked at the setting, and part of
13 that was -- was monitoring data? Can you explain that.

14 A. Well, when you're looking at any project, you look at
15 the -- look at what is available by way of monitoring data in
16 that area, meaning in the general vicinity. We call it the
17 "regional area," because air pollution, when it disperses, it
18 doesn't just affect things right next to a facility. It
19 disperses, and it can affect a region. And so I looked at
20 regional monitoring data based on the Bay Area Air Quality
21 Management District's website. And that data is reported on
22 their website, and some data is reported on the California Air
23 Resources Board website. So it's that type of ambient
24 monitoring data that I was -- looked at.

25 Q. Perfect. And did you familiarize yourself with the

1 location or the type of these monitors in and around the OBOT
2 facility?

3 **A.** Yes, I did.

4 **Q.** Can you tell us about that briefly.

5 **A.** Well, there are monitors that measure what we call the
6 "major or criteria air pollutants," things that have National
7 Ambient Air Quality Standards. And those monitors measure
8 various of those NAAQS pollutants, including the particulate
9 matter fractions that are of interest here.

10 But I did look at even ozone data that was being
11 monitored, nitrogen oxide data, sulfur dioxide data, and
12 particulate matter, PM10 and PM2.5 data. I recall looking at
13 all of the NAAQS pollutant data.

14 **Q.** Okay. And why is it important, if it is, that these are
15 ambient monitors and not some other kind of monitor?

16 **A.** Well, ambient monitoring data is used by air agencies, and
17 the Bay Area AQMD has the job of ensuring that the nine-country
18 region here either meets or maintains or attains those National
19 Ambient Air Quality Standards. So I wanted to see how close
20 those monitors were recording.

21 And besides, it was part of verification. The ESA report
22 did discuss monitoring data and attainment status data. And so
23 part of my task was to review the ESA report, and I was
24 essentially reviewing things that they had written to do my
25 independent checks on them.

1 Q. And so the monitors you looked at and the monitoring data,
2 did that include emissions just from the OBOT facility, where
3 that's going to be built or all around?

4 A. No. The monitors -- depending on the location, of course,
5 are only monitoring existing facilities and activities.

6 Q. Correct.

7 A. They cannot monitor what is not present.

8 But there were monitors in the sort of regional vicinity.
9 There wasn't one that was right exactly in the footprint of
10 where the OBOT facility would be built. And that's usually the
11 case. But there were several monitors in the general area.
12 That's what I recall.

13 Q. Okay. So those monitors, if I'm getting your testimony
14 correct, would measure emissions from any source in that area?

15 A. Right. They are not measuring the integrated contribution
16 of all existing sources and activities.

17 Q. Okay. And there is no way to separate emissions that are
18 recorded by that monitor from one source to another?

19 A. Not without doing a whole lot of other analysis.
20 That's -- culpability analysis or separation analysis is a
21 different exercise. I didn't attempt to do any of that.

22 Q. And when you said you looked at the setting -- and I think
23 you mentioned the sort of geographic, you know, neighborhood
24 where this facility was going to be located -- what did you
25 investigate there?

1 **A.** Again, part of verification was just the general
2 demographics. I understood that that facility immediately
3 adjacent to where this would be located in West Oakland was a
4 particular type of facility denoted by Bay Area Quality
5 Management District as a CARE facility, requiring -- I think
6 they have designated certain areas within their jurisdiction as
7 CARE facilities. The ESA report had referenced that, and I had
8 seen that in the Bay Area Air Quality Management District
9 website, so I familiarized myself with that.

10 **MR. AKER:** Okay. Your Honor, I would like to put up
11 a demonstrative.

12 **THE COURT:** Sure.

13 **MR. FELDMAN:** May I stand, your Honor?

14 **THE COURT:** Of course.

15 (Demonstrative displayed)

16 **BY MR. AKER**

17 **Q.** Okay. Do you see the exhibit in front of you?

18 **A.** Yes, I do.

19 **Q.** Is this the location of the proposed terminal?

20 **A.** Yes. The one that is marked in red or orange, yes.

21 **Q.** And this has a reference in the cross-hatching, to Cal EPA
22 disadvantaged community.

23 Do you see that?

24 **A.** Yes. I see that cross-hatching.

25 **Q.** Are you familiar with that category of...

1 **A.** I had seen that in some of any reviews, but I seem to
2 recall the CARE designations by BAAQMD --

3 **Q.** Okay.

4 **A.** -- more than this broader Cal EPA designation.

5 **Q.** And they said you -- oh, were you -- did you also look at
6 meteorological data?

7 **A.** Yes, I looked at meteorological because they entered into
8 the air pollution emission estimates that ESA had done. So I
9 went and reviewed not only the annual data that they had used,
10 but also a more longer 10-year length of data that I was
11 interested in, yes.

12 **Q.** Okay. We'll talk about that when we go through the ESA
13 report.

14 And then I assume you wrote your expert reports in this
15 case, correct?

16 **A.** I did.

17 **Q.** All right.

18 **MR. AKER:** Could we have Trial Exhibit 499 up,
19 please?

20 (Document displayed)

21 **MR. FELDMAN:** Your Honor, excuse me. I will return
22 to my seat.

23 I have an objection to the introduction of this report as
24 hearsay.

25 **THE COURT:** Sustained.

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1 **MR. AKER:** I was just going to ask him to identify
2 it, your Honor.

3 **MR. FELDMAN:** I have no objection to it being
4 identified. I intend to use it to impeach the witness. So I
5 have no objection to it being identified.

6 **THE COURT:** Okay.

7 **BY MR. AKER**

8 **Q.** Is this your report, Dr. Sahu?

9 **A.** It seems to be the first page of my report, yes.

10 **Q.** Yes. I wonder if you could just review for the Court some
11 of the science that's involved here. We have had some
12 testimony already about what PM2.5 is, but maybe you could just
13 briefly describe that.

14 **A.** Well, PM2.5 is currently regulated as its own pollutant
15 under the National Ambient Air Quality Standards. It's a very
16 fine fraction of particulate matter. It's two and a half
17 microns or smaller in what we call "air dynamic diameter,"
18 which means, for the most part, really, we cannot see it. Most
19 people cannot see PM2.5.

20 So that is -- and once you emit PM2.5, and many, many
21 activities emit PM2.5, it disperses with the air currents and
22 the winds and so on until it is washed out by rain or until it
23 adheres to another surface and therefore gets removed from the
24 air. It basically would stay suspended for a very, very long
25 time because it is such a light -- such a small particle that

1 it tends to stay suspended for extremely long periods of time.

2 Q. Okay. And as you said, you can't see it, correct?

3 A. No, people can't see PM2.5, unless -- I mean, I could -- I
4 mean, we have all been in dark rooms where there is a
5 flashlight or a ray of sunlight and you can see the particles,
6 because -- under those circumstances, you can essentially make
7 them visible. But ordinarily if there is other illumination,
8 you cannot see PM2.5.

9 Q. Okay. You mentioned your review of the -- sort of the
10 design, the preliminary design of this OBOT terminal. Can you
11 talk about that. What did you do there?

12 A. Among the documents that I reviewed were this -- what I
13 call "the Basis of Design documents" that were also reviewed by
14 ESA, but has the -- really the description and the detail of
15 what was going to be built. So I reviewed those OBOT
16 documents.

17 Q. Okay. And can you describe those documents for us. And
18 I'm particularly looking for the sort of level of completion.

19 A. The documents were preliminary. They were conceptual, if
20 I recall, and they were in some cases very preliminary, but I
21 was looking for specific information, like, the kinds of
22 materials that would be handled, and there was some discussion
23 of that, but it was somewhat preliminary again.

24 There was some discussion of throughputs, obviously, that
25 ESA has used and I wanted to verify. And there was some

1 description of those in different documents as part of the
2 Basis of Design document.

3 **Q.** Okay. And I think there was some reference on the Basis
4 of Design to control mechanisms, if I'm using the right
5 terminology. Can you talk about that?

6 **A.** Yes. As part of the facility conceptual design, it
7 proposed certain types of controls. It means the facility
8 proper where the, you know, beginning where the rail cars would
9 dump the coal, unloading facility, and that would be covered,
10 was my understanding.

11 The conveyors that would then convey that coal to a
12 storage facility would also be covered.

13 And then the storage facility would also be covered. And
14 then from there the coal would be transported -- or transloaded
15 to ships, and it would have sort of these transfer shutes or
16 socks that would actually transfer them into the hold of the
17 ship.

18 So those were the type of design features anticipated in
19 the facility proper.

20 **Q.** What level of detail did you find with respect to these
21 control devices?

22 **A.** They were not engineering drawings. They were certainly
23 conceptual drawings. There was not a lot of detail, other
24 than -- so I called them "features" as opposed to engineered
25 controls at that point.

1 Q. Okay. Was there any information in the Basis of Design
2 about the manufacturers of these types of controls, things like
3 that?

4 A. No, there were not. Not that I recall.

5 Q. What -- in doing your review of the ESA calculations, what
6 assumptions did you make regarding the use of controls for each
7 sort of --

8 A. Sure.

9 Q. -- part of the OBOT operation?

10 A. Again, focusing on the OBOT operation, which is these
11 transfer operations primarily, the coal transfer, unloading
12 first, all the way to the ship transloading, I -- I saw that in
13 their calculations they had tried to account for that,
14 essentially give them credit by reducing the ambient wind
15 values to lower wind values within these type of areas. And
16 that seemed to be a generally acceptable way of doing it, given
17 the level of design that was available.

18 In some cases I agreed with ESA as to the level of wind
19 and a couple of cases -- I think in one case particularly, I
20 did not agree with them. So I revised that in my calculations.
21 But that's -- that's how I incorporated those features into the
22 emission calculations. And both verifying ESA as well as doing
23 my own.

24 Q. How about the rail part of this operation? Did you make
25 any assumptions regarding the use of control devices, covers,

1 surfactants, that kind of thing?

2 **A.** And then that leads to that first part, how does the coal
3 get there. Obviously by rail car. And the two broad controls
4 that were discussed in the ESA report, which is either covering
5 them completely and then -- or using surfactants to -- to
6 reduce the dust potential. I looked at those very extensively,
7 at least as part of my review.

8 **Q.** Okay. And we'll talk about that later in more detail, but
9 I wanted to find out first what your assumptions were.

10 I want to talk now about the adjustments you made to the
11 ESA calculations that you've been discussing. And I count
12 seven of them here, but we'll just go through them.

13 What about rail transport distances that ESA has assumed?

14 **A.** I didn't make any changes to those. I just left the
15 distances the same.

16 **Q.** You agreed with those?

17 **A.** Right. I mean, they assumed certain paths through the --
18 and looking at Oakland or West Oakland, whatever they had made,
19 I had -- I did not make any adjustments to those.

20 **Q.** Okay. What about rail transport, coal loss emission
21 rates, if I've got that correct. And maybe you could just
22 explain what that is.

23 **A.** And I should note that because I did not make any
24 adjustments to the rail distance, I don't comment on that in my
25 report either. It's something I didn't change, so I didn't

1 discuss it in my report.

2 Q. Sure.

3 A. As to the erosion potential or this idea that coal would
4 be -- or PM2.5 particles, not coal particles, would be
5 generated -- would be -- and then through wind action, what we
6 called aeolian forces. They would be removed from the vicinity
7 of the rail car, from the top of the rail car.

8 I disagreed, and I made a sight adjustment -- one
9 adjustment to their emission rate, if you will. It was
10 basically at that point expressed as how many pounds per mile
11 per rail car -- that number. I used my judgment, and I
12 adjusted that.

13 Q. Do you recall what the adjustment was? I think ESA used
14 one pound.

15 A. ESA used one pound per rail car per mile. I used 1.25
16 per -- per rail car per mile.

17 Q. And why did you make that change?

18 A. I made the change looking at the available studies. And
19 then they are referenced in many documents through -- that I
20 did review, and I had reviewed for other matters that I have
21 worked on and I am working on.

22 So based on that, based on my understanding of the nature
23 of the coal, which would be primarily Utah coals, but also
24 potentially coal from other regions, like the Powder River
25 Basin, I -- I decided that the value they had used, which was

1 bituminous coal related value from a study in Virginia, was not
2 going to be entirely appropriate. And I increased that by
3 about 25 percent to reflect the mix of coal that would be
4 handled at the OBOT facility.

5 **Q.** Okay. So -- but that was based on the type of coal, is
6 that right?

7 **A.** Primarily the type of coal, yes.

8 **Q.** Okay. And then what about the impact of controls? I
9 think -- I've got here 25 percent annual and 10 percent daily.
10 Can you explain for the Court what you meant there.

11 **A.** For the rail calculations, I did these annual calculations
12 which are tons per year, which are -- have been discussed in
13 these proceedings. And then I also did some daily
14 calculations, which are a little different.

15 And part of -- when I look at emission calculations, my
16 practice has been permitting and looking at the type of
17 emission calculations that are done to support permitting. And
18 they usually require, frankly, you know, estimates of
19 worst-case emissions, so-called "maximum emissions" or even
20 potential to emit emissions. And that's what is done. If the
21 OBOT facility goes to apply to the Bay Area Air Quality
22 Management District, that's what they have to estimate, not
23 some average emission.

24 So with that sort of reference point in my mind, I thought
25 it was frankly appropriate to -- to increase that erosion

1 emission factor for rail cars.

2 And because I had reviewed the covers and the surfactants
3 and to the extent that they might be available to be used and
4 effective, I -- my opinion is -- and I -- is that the covers,
5 rail car covers for coal are not going to be appropriate now or
6 in the foreseeable future, but surfactants certainly have been
7 attempted. I'm aware of surfactants being used, but their
8 efficacy is questionable at distance from where they are
9 applied. So I reduced surfactant-related emission factors or
10 controls from what ESA had used, and I used two different
11 values: One for the annual, and one for the daily maximum,
12 those 10 and 25 percent values.

13 **Q.** Okay. We'll talk about the covers and surfactants a
14 little bit later in more depth, but just moving through the
15 adjustments you've made.

16 You've already talked about meteorological data.

17 **A.** Yes.

18 **Q.** You used ten years rather than ESA's one year?

19 **MR. FELDMAN:** Excuse me. I object. Leading.

20 **MR. AKER:** Just trying to save time, your Honor.

21 **MR. FELDMAN:** That's why I'm objecting.

22 **THE COURT:** Sustained.

23 **BY MR. AKER**

24 **Q.** Go ahead. Explain the change you made to the
25 meteorological data.

1 **A.** This was really a verification. They had used
2 meteorological data like wind speed in their calculations, and
3 I saw that they had looked at a one-year report of wind data, I
4 think from Oakland Airport. And I wanted to go back myself and
5 look at a longer run of historical data.

6 I did do that. I did not change the ESA assumption, which
7 was still appropriate, but I wanted to as -- as part of my
8 verification, I went and looked at that. That didn't result in
9 a change in the wind data that ultimately ESA had used.

10 **Q.** And just very briefly because I know it's not a key issue
11 here. But moisture content, you made some -- an adjustment
12 there?

13 **A.** Moisture content is not a key issue for the rail stuff,
14 but it is a key issue for some of the OBOT facility operations,
15 the transfer operations.

16 I did not change the ESA values, but I looked at later
17 on -- if you're talking about ESA report right now, I don't
18 believe I made changes. But later on Mr. Chinkin had used a
19 different value, and I certainly suggested that that was not
20 appropriate.

21 **Q.** Okay. And maybe you could explain that. Why is the
22 moisture content important for the OBOT facility?

23 **A.** The moisture content, as you can see -- as you can think
24 the more moist the material, the more sort of wet it is, the
25 lower the propensity for air emissions.

1 So assuming a moisture content that is high would result
2 in low values of air emissions and vice-versa.

3 **Q.** Okay. And you've already referenced briefly the interior
4 wind speeds for coal storage. Can you talk about that briefly.

5 **A.** Right. The idea, when you put these controls, these
6 conceptual controls, even though they were not engineered, they
7 were certainly designed to shield these operations from the
8 ambient wind.

9 So it is not appropriate in my view -- and ESA had, again,
10 recognized that. And they used a lower wind value when they
11 did these calculations for emissions within these covered
12 areas. And that's what I meant by these interior wind speeds.

13 **Q.** Okay. And does that also relate to the speed of the
14 conveyors?

15 **A.** Well, yeah, the relative air movement in a conveyor is --
16 it's not the air that is moving so much as the conveyor that is
17 moving, but it still creates the relative velocity between the
18 coal on the conveyor and the air surrounding it.

19 **Q.** Okay. Now, you made -- there has been a reference to your
20 supplemental report already discussed here. Can you describe
21 what -- what was the need for the supplemental report?

22 **A.** The only change there is when the coal comes in by rail
23 car, it then is staged first at some distance from OBOT, and
24 then, of course, it is taken to the terminal itself. When I
25 prepared my initial report, I had considered staging emissions,

1 much like ESA had done at this somewhat, what I call "remote
2 location" later on.

3 But I became aware after I did my report of work by
4 another expert, Mr. Sullivan, relating to the actual logistics
5 of train movement and how these would actually come to the
6 terminal. And based on that, I became aware that there would
7 need to be some additional staging, much closer to the
8 facility, and so I just estimated another line of staging
9 emissions in the emission calculations. That was really the --
10 the -- the added close-in staging emissions in my supplemental
11 report.

12 **Q.** Okay. And what effect did that have on your calculations?
13 Did it increase them, decrease them?

14 **A.** Well, it increased them by about another -- if memory
15 serves, around three tons or so per year of PM2.5.

16 **Q.** Okay. And I know in your report you discussed the number
17 of trains that were assumed. What assumption did you make on
18 the number of trains that would be coming through on a daily
19 basis?

20 **A.** Well, I -- I tried to be consistent with what -- what I
21 thought the Basis of Design was, and somewhere around one --
22 one train per day. In some cases perhaps I think it was
23 something like three trains every two days. But those types of
24 assumptions.

25 **Q.** Okay. And for a throughput of 5 million tons, could that

1 be done with one train per day in your opinion?

2 **A.** In my understanding, it is not. It's 5 million metric
3 tons, so it's a little more tons than we use in the U.S., by
4 10 percent more.

5 But my understanding is that they would need about three
6 trains every two days, if I read the Basis of Design documents.

7 It is further my understanding that their own analysis
8 done by one of their own consultants thought even with that, it
9 would be very tight. It could be -- the choreography between
10 the trains coming, all the operations at the terminal and the
11 ship emissions, all the ships coming and going, all that would
12 have to be very tightly choreographed. And -- but I seem to
13 recall something like three trains every two days.

14 **Q.** Okay. That would be 1.5 trains per day?

15 **A.** Right.

16 **Q.** But for purposes of your calculations, you assumed one
17 train per day?

18 **A.** I did assume one to be very conservative, because on some
19 days they may not get -- you know, because they were also doing
20 daily calculations. For some days they were -- you may not get
21 one and a half trains, as you put it.

22 **Q.** Okay.

23 **THE COURT:** Now is a good time to take a quick
24 morning break?

25 **MR. AKER:** That will be fine, your Honor.

1 **THE COURT:** Why don't we take a five-minute break and
2 then we'll resume until -- and go until around 12:30 and then
3 have lunch.

4 **MR. AKER:** Thank you, your Honor.
5 (Whereupon there was a recess in the proceedings
6 from 11:44 a.m. until 11:52 a.m.)

7 **THE COURT:** Okay. All set.

8 **BY MR. AKER**

9 **Q.** Dr. Sahu, I want to ask you some questions on specific
10 issues that have come up in this case.

11 First one is threshold friction velocity. And if you tell
12 the Court which threshold friction velocity you chose for your
13 calculations.

14 **A.** Again, it was in the context of verifying what ESA had
15 done. They had used a value of .54 from a section of AP-42
16 called 13.2.5, which is a very widely used section of AP-42 for
17 estimating emissions -- fugitive emissions from storage piles,
18 I mean, in many jurisdictions.

19 I used -- I did not change that. I basically accepted
20 that, given the level of detail we had. So it's basically the
21 one corresponding to coal dust over a concrete surface. And
22 that's the assumption they had used, and I did not change that
23 for my calculations.

24 **Q.** Okay. And was there another choice for threshold friction
25 velocity that you did not pick?

1 **A.** There were at least two other choices in that same table,
2 actually. One was the much talked about 1.12 meters per second
3 value that Mr. Chinkin used relating to uncrusted coal.

4 And then there was another one which has not been
5 discussed, which is .55, I believe, for ground work. But that
6 whole table came from the two studies that were the subject of
7 discussion here, references, if you will, from AP-42. And they
8 get into the detail of what those numbers mean and when they
9 came from and how old they are and so on.

10 **Q.** Can you tell us a little bit about what AP-42 is.

11 **A.** AP-42 is a compilation that goes back to 1970 of available
12 emissions and stack testing data that EPA and other air quality
13 agencies have accumulated over the years. It is a compilation.
14 That's what it is.

15 It is not a -- it's nothing more than the agency saying:
16 These are the types of emission calculation methodologies or
17 emission factors or equations that might be appropriate for the
18 situations than we have seen. It is not usually the case
19 that -- except in very simple matters, where people don't have
20 to exercise their own judgment in interpreting and applying
21 AP-42 to their own circumstances.

22 **Q.** Are these precise numbers or just general guidelines?

23 **A.** These are general guidelines. In many cases in AP-42, the
24 agency has attempted to rank these emission factors with the
25 qualitative A, B, C, D or E type of ranking, denoting the level

1 of confidence they have in these factors. So they are not by
2 any means definitive.

3 **Q.** Okay. And there was some testimony here yesterday when
4 you were here that the City used the wrong AP-42 section,
5 namely 13.2.5. Did you agree with that or disagree?

6 **A.** I disagreed with that strongly, because that was in -- as
7 I said earlier, AP- -- this section of AP-42 -- and there
8 really is no other section of AP-42 for estimating storage pile
9 emissions, is the one that is used by agencies, by permitting
10 authorities, by consultants that do permitting, and essentially
11 the air quality community that deals with storage pile
12 emissions.

13 And the -- so I don't see any problem with -- with using
14 AP-42 and that particular section to estimate storage pile
15 emissions.

16 **Q.** If I get your testimony correctly, there is no other
17 section that would be more applicable?

18 **MR. FELDMAN:** Excuse me, your Honor. I object.
19 Leading.

20 **THE COURT:** Sustained.

21 **BY MR. AKER**

22 **Q.** Is there another section that would -- you could also
23 choose from?

24 **A.** I think I mentioned in the previous answer that there was
25 none that I -- that I know of.

1 Q. Okay. So you've discussed the two -- at least two of the
2 three factors that might apply here: The uncrusted coal pile
3 and the fine coal dust on a concrete pad.

4 Why did you not pick the uncrusted coal pile as -- as the
5 applicable factor?

6 A. I didn't do it for a very simple reason. It is because --
7 it is my opinion, and I think I've expressed that previously,
8 that even the .54 that ESA had used was very conservative,
9 meaning it would tend to underestimate emissions. And that in
10 reality, because we're talking about PM2.5, that the threshold
11 friction velocity would be much lower.

12 I'm well aware of AP-42 and the data that goes into a lot
13 of the sections I use, including that one. And all the studies
14 go back to the late '80s. And where they simply did not
15 measure the threshold friction velocity for PM2.5. All of
16 those numbers, whether it is the .54 or the 1.12, they both
17 come from measurements of threshold friction velocity for
18 larger particles, for the total suspended particles, which is
19 PM30 or for particles that are around PM15, because they're all
20 visual measurements. They use wind tunnel, portable wind
21 tunnels in the field, as Mr. Chinkin even alluded to, and
22 literally made of Plexiglas that was placed on the ground. And
23 you increase the wind and you visually saw when particles would
24 start to move and erode and identified threshold friction
25 velocities.

1 You can't see PM2.5. And -- and it's well known that
2 PM2.5 measurements of threshold friction velocity are simply
3 not part of those compilations. With that knowledge, with that
4 background, my -- my assumption was -- I was certainly not
5 going to go above .54. If anything, it would be lower. So
6 I -- I simply left it alone.

7 Logically it made no sense for me to go to the higher
8 values, when you're talking about PM2.5. And we all know that
9 the fine particles, the finer the size, the finer the particle,
10 the easier it is to entrain, if you will, into the atmosphere.
11 So because of all those reasons, I saw no reason to go to the
12 1.12 value.

13 **Q.** And what about the uncrusted coal pile? We're talking
14 here about the rail staging calculations, correct?

15 **A.** Yeah. The rail staging is where that really has been
16 applied.

17 **Q.** Okay.

18 **A.** I mean, because the rail, we use the -- this emission
19 factor of -- on a per car, per pound -- you know, per car, per
20 mile basis.

21 But for staging, we used -- both parties have used the
22 coal, this AP-42 13.2.5 --

23 (Court reporter clarification.)

24 **A.** Both parties have used the 13.2.5 section of AP-42, that's
25 correct.

1 Q. Well, these are coal pipes, right, within a train car,
2 correct?

3 A. Yes.

4 MR. FELDMAN: Excuse me. Object.

5 BY MR. AKER

6 Q. Why did you --

7 MR. FELDMAN: I object. Leading. Move to strike.

8 THE COURT: Overruled.

9 BY MR. AKER

10 Q. Why did you not use the uncrusted coal pile? It sounds
11 like that would be the most applicable.

12 A. Okay. So the first thing was the size of the particle and
13 the threshold friction velocity, as we talked about.

14 The second is the AP-42 section does not deal with moving
15 piles, does not deal -- does not simply deal with moving or
16 vibrating or piles that are anything but stationary, literally.
17 That means in one place.

18 And when you look at 100 tons of coal, give or take, in a
19 rail car that is moving, that is subject to a great variety of
20 forces at different times, not only leaving the mine but on its
21 journey and right at the staging location itself, nobody in
22 their right mind would call that a stationary coal pile.

23 And so for -- that is another reason that we have to be
24 careful about estimating and applying AP-42 to these
25 situations. And crusting, as it's used in AP-42, refers

1 specifically to a situation where you have a stationary pile,
2 and let's say you don't want to do anything with it and you
3 want to store it for some long time. You put a chemical
4 suppressant or you put a dust suppressant, and it develops a
5 crust because you're not touching it. You're not working it.

6 That is not the situation for the coal that is in a rail
7 car that is moving, that is subject to vibration, that is
8 subject to wind forces, that is subject to scouring by wind,
9 that is subject to being buffeted by the other locomotives and
10 the cars.

11 You know, the BNSF, who has studied this for a long time,
12 they apply even this crusting agents, and a few miles down,
13 their own employees have said there is significant scouring
14 because of what I call "vortex shedding." It's like being
15 behind a big semitruck, and three or four lengths behind you
16 can feel severe vibration. That's because the vortices that
17 are being shed from the truck. Same thing happens in a train,
18 but only much more complicated.

19 For all those reasons, any crust that you apply is not
20 going to be maintained. There is settling in the coal cars as
21 the -- as the coal moves -- movement.

22 All those reasons tell me that any crust, even if it was
23 perfectly applied -- and that's not true -- would break up. It
24 would be inappropriate, therefore, to simply say that, let me
25 go to that section of AP-42, pick the highest value, which is

1 really what you can do, use 1.12, because that puts -- suppress
2 your emissions. The higher the threshold friction velocity,
3 the lower the emissions. That would be entirely inappropriate.

4 **Q.** Okay. And do you agree or disagree with Mr. Chinkin's
5 opinion that the uncrusted coal pile is based on an active
6 moving pile?

7 **A.** No. Actually, I was very surprised. I was in the
8 courtroom yesterday when he basically said that that AP-42 line
9 item supposedly was from a -- a moving -- a pile that is being
10 reworked, and a vibrating pile.

11 To my knowledge, and I know based on restrictions that
12 were imposed by the Court not too long ago -- we cannot get
13 into the details of the underlying documents -- but my
14 knowledge of AP-42 -- and I've used those sections and those
15 references not just in this matter but in other matters -- they
16 are not for moving piles. They are stationary coal piles. We
17 can all agree with that.

18 **MR. FELDMAN:** Objection. Move to strike the last
19 answer, your Honor.

20 **THE COURT:** Overruled.

21 **BY MR. AKER**

22 **Q.** Okay. Another -- you -- one of the key elements of your
23 calculations, I assume, or your verification of ESA's
24 calculations was the rate at which coal dust would be given
25 off, or whatever the term is, from rail cars as they are coming

1 into the OBOT facility, is that correct?

2 **A.** Yeah. I mean, one of the central points, I think, that's
3 my understanding of following the proceedings, is whether there
4 is a finite amount of erodable material.

5 In other words, if there's no dispute, I think that
6 when -- in the mine when the coal cars are loaded, of course
7 there is erodable material. The coal breaks up. It's a
8 fryable material. Even the sub-bituminous coal -- I mean, even
9 the bituminous Utah coal is still fryable. All coals are
10 fryable, including bituminous coals. So the fact that there
11 will be dust there is, I think, pretty accepted.

12 The question is there is some discussion that that is a
13 finite amount, and as you get farther away from the mines, you
14 will lose that because all that will be dispersed. That is not
15 my view.

16 My view is the -- due to the forces on rail cars that I
17 just discussed, and they are significant and severe and the
18 journey is not -- is not a gentle one, they -- they are
19 created. And I'm talking about PM2.5 now. These are the
20 particles that you don't necessarily see that are created. So
21 there is enough in the literature about visible coal dust at
22 great distances from these mines. And that's -- that's the
23 bigger particles, things you can see, not the PM2.5 you can't
24 see.

25 So, yes. Just as an engineer, as a scientist, as a

1 technical person, as somebody having decades of experience
2 dealing with coal, it's -- it's quite silly to suggest that
3 somehow there is a stopping distance beyond which, you know,
4 the coal -- the train car coal losses will be zero when you
5 look at things like PM2.5, because the actions that cause the
6 erodable materials have simply stopped. They don't stop.
7 Forces on rail cars continue.

8 **Q.** And you used -- you agreed with ESA that a sort of
9 constant emission rate of coal dust from trains was appropriate
10 for trains coming in from Utah all the way to Oakland. Can you
11 explain why you feel that was correct.

12 **A.** Again, given the amount of information we had and how the
13 cars would be staged, and looking at making a reasonable but
14 not even a worst-case assumption, quite honestly, it was a
15 reasonable assumption to say that you would have at least the
16 same amount of PM2.5.

17 When I did my review, I could have said the PM2.5 being
18 emitted closer to the mine was a lot higher, in other words,
19 and could have diminished down to the level that I say it would
20 have been nearer the terminal. I did not do that because I was
21 not interested in estimating emissions, 50, 100, 200 miles from
22 the mine. I was interested in what was going on in West
23 Oakland, in Oakland.

24 And so it seemed entirely reasonable, based on the
25 literature again, the factor that I had used, if you recall, I

1 have used 1. -- I have used 1.25, or even a threshold friction
2 velocity of .54 rather, and I know that is too big. It is too
3 large. I've already underestimated the emissions so much that
4 it -- it did not seem to be a proper use of judgment to do
5 something even lower.

6 **Q.** Okay. And why is that -- you've explained this briefly
7 before, but why is the 0.54, if I have the number correct, that
8 you used too high?

9 **A.** The underlying documents, the work that supports that
10 number is based on a visual observation of -- between PM15,
11 PM30, using these portable wind tunnels -- that are -- the best
12 technology that was there in the late '80s. No question. But
13 they were not PM2.5 threshold friction velocities.

14 **MR. FELDMAN:** I move to strike. That was evading
15 your ruling.

16 **THE COURT:** That's correct.

17 **BY MR. AKER**

18 **Q.** Let's talk about covered rail cars.

19 **A.** Sure.

20 **Q.** What was your opinion on the use of those?

21 **A.** Well, given that all coal has volatility -- in other
22 words, inherent to coal is volatile matter. And that's not
23 methane that we talked about in the testimony earlier. That's
24 just organics that are part of the coal matrix.

25 Any coal has minerals and ash and it has, of course, the

1 carbon and it has volatile matter.

2 Unlike petcoke, for example, which does not have volatile
3 matter because it comes from a different refinery process, all
4 that is driven off.

5 That volatile matter, if it's put in a confined space, is
6 going to create a potential hazard. And it's because of that
7 reason that coal-covered cars are not in use. And I couldn't
8 find any that were in use. Just as ESA had verified and I --
9 essentially the same thing. It led me to the conclusion, not
10 just on practical applicable reasons, but on good --

11 (Court reporter clarification.)

12 **A.** But also theoretical reasons that it would be very
13 difficult to find use of these covered cars given the
14 combustibility risk.

15 **MR. FELDMAN:** Your Honor, I move to strike the last
16 answer. The witness was not disclosed on any topic relating to
17 combustibility. There is nothing, to the best of my
18 recollection, in any of his reports about that. And I move to
19 strike.

20 **MR. AKER:** Your Honor, a primary basis of Mister --
21 Dr. Sahu's opinions was the use of covered rail cars, and I'm
22 simply asking him are they in use and if not, why are they not
23 in use.

24 **THE COURT:** Did he provide an opinion on that in his
25 reports?

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1 **MR. AKER:** I believe he did.

2 **THE COURT:** Okay. Show me.

3 **MR. AKER:** Because of the combustibility.

4 **THE COURT:** Show me.

5 **MR. FELDMAN:** I will apologize if I'm mistaken, but I
6 don't remember that.

7 (Brief pause.)

8 **MR. AKER:** I don't see it on a quick review, your
9 Honor.

10 **THE COURT:** Okay.

11 **MR. AKER:** But he definitely does talk about covers
12 and their use.

13 **THE COURT:** Show me where it is or the motion to
14 strike is granted.

15 **MR. AKER:** The rail car covers? He talks about rail
16 car covers, but I don't see the reference to combustibility.
17 I'm simply asking him the reason why rail cars are not used.

18 **MR. FELDMAN:** That's my objection.

19 **THE COURT:** He didn't provide an opinion on the -- on
20 the combustibility of -- he just assumed that rail cars would
21 not be used, but he did not provide an opinion about why.

22 **MR. AKER:** I don't see it right offhand here, your
23 Honor.

24 **THE COURT:** Okay. If he didn't provide an opinion
25 about why, then that's beyond the scope of his expert

1 testimony. Do you want to -- you're free to take time if you
2 want to look to see if he provided an opinion on that.
3 Otherwise, I have to -- I don't have any choice but to grant
4 the motion to strike the last question.

5 **MR. FELDMAN:** For what it's worth, he actually
6 assumed that they are used. That's on Page 7,
7 subparagraph (c).

8 **MR. AKER:** What are you reading from?

9 **MR. FELDMAN:** TX-499.0010, Page 7 of the document,
10 subparagraph (c). The witness assumes -- it's a little hard to
11 figure out but ESA assumed 85 percent, he is assuming
12 25 percent for covers or surfactants.

13 **MR. AKER:** In his rebuttal report, your Honor, at
14 Page 3 --

15 **THE COURT:** Just -- I just want to say --

16 **MR. AKER:** Sure.

17 **THE COURT:** -- in his initial report, he does say
18 that he assumes emissions will be reduced by around 25 percent
19 based on -- he assumes that the controls will be less effective
20 than ESA assumes. And part of why he says that is that the use
21 of binders and dust suppressants and coal covers and covers are
22 not likely to be -- are likely to be less effective compared to
23 their effectiveness at the start of the journey in Utah given
24 the long travel to the terminal.

25 So, so far his report -- if anything assumes the use of

1 covers, it doesn't express any opinion about coal covers being
2 dangerous or causing -- sorry -- rail car covers being
3 dangerous or threatening to cause explosion. So where -- now
4 you want to point to the supplemental report, which is
5 Exhibit 501, is that right?

6 **MR. AKER:** It is 501, your Honor, on Page 5, where he
7 talks about his disagreement with Mr. Chinkin on: Operators
8 have agreed to use rail car covers since I have not seen any
9 specific designs in the record nor have I seen any binding
10 commitments --

11 **THE COURT:** I'm sorry. I don't yet see where you
12 are. Up at the top there? Paragraph (a)?

13 **MR. AKER:** Yeah.

14 **THE COURT:** Okay.

15 **MR. AKER:** And he disagrees with Mr. Chinkin's
16 conclusion that these rail car covers will be used to cover
17 these -- the rail cars.

18 **THE COURT:** Okay. The motion -- that's all you have?

19 **MR. AKER:** Yes.

20 **THE COURT:** The motion is granted. That last answer
21 will be stricken.

22 **BY MR. AKER**

23 **Q.** Dr. Sahu, let me ask you: To your knowledge, are rail car
24 covers used for coal?

25 **MR. FELDMAN:** Excuse me, your Honor. I object.

1 There is no foundation for this witness to be an expert on coal
2 car covers. There are experts about that.

3 **MR. AKER:** May I lay a foundation, your Honor?

4 **THE COURT:** No. Sustained.

5 **BY MR. AKER**

6 **Q.** Do you have an opinion about the effectiveness of coal car
7 covers?

8 **MR. FELDMAN:** Same objection.

9 **MR. AKER:** This is clearly part of his report, your
10 Honor.

11 **THE COURT:** You mean that portion of the rebuttal
12 report he just read to me?

13 **MR. AKER:** Absolutely. Yeah.

14 **THE COURT:** He said he didn't know anything about
15 them in the supplemental report.

16 **MR. AKER:** Well, actually in his opening report, he
17 assumed control efficiencies from these surfactants or rail car
18 covers, so that was directly within his opening report.

19 And then in his rebuttal report, he challenges
20 Mr. Chinkin's claim that these cars will be covered.

21 **THE COURT:** Well, all he says in his report is that:
22 I haven't seen any specific designs for such covers in the
23 record, and I've not seen any binding commitments for how this
24 agreement to use covers effectively would be enforced.

25 And he complains that Chinkin merely says that rail car

1 covers are being evaluated.

2 I mean, other than that, he doesn't provide any opinion on
3 the use of rail car covers as far as I can see.

4 **MR. AKER:** Well, I think I asked him does he have an
5 opinion as to the efficiency of covers or surfactants, not the
6 use of --

7 **THE COURT:** Covers. Where is his opinion on the
8 efficiency of covers?

9 **MR. AKER:** It's, your Honor, what you just read
10 about, the 25 percent, the 10 percent.

11 **THE COURT:** That -- that even covers would not be as
12 efficient as 85 percent.

13 **MR. AKER:** Correct. Or surfactants actually also.

14 **MR. FELDMAN:** There is no basis. He is not an
15 expert, as far as I know, in coal car covers or their
16 effectiveness.

17 **THE COURT:** I'll let you ask a little bit about
18 his -- what drove his assumptions regarding coal covers.

19 It appears to be, if not outside the scope, on the border
20 of beyond the scope of his report. And so I'll let you ask --
21 explore a little bit about it.

22 **MR. AKER:** Sure.

23 **MR. FELDMAN:** My further point is there is no
24 foundation for the witness's expertise in evaluating something
25 that he has no experience with.

1 **THE COURT:** I think you're probably right, but I'll
2 let him ask a couple questions about it and see how it goes.

3 **MR. FELDMAN:** Okay.

4 **BY MR. AKER**

5 **Q.** As part of your experience, do you have experience with
6 coal trains and coal cars?

7 **MR. FELDMAN:** I'm sorry. What was that? I just
8 didn't hear.

9 **THE COURT:** Coal trains and coal cars.

10 **A.** Yes.

11 **BY MR. AKER**

12 **Q.** Can you briefly describe your experience.

13 **A.** Well, I dealt with emissions from the transportation of
14 coal in many of my projects. And I also am familiar with the
15 properties of coal. And all I did in my report was talk about
16 the feasibility of covers simply given my knowledge of the
17 properties of coal.

18 **Q.** Okay.

19 **A.** And I have about 30 years of experience in the properties
20 of coal.

21 **Q.** Okay. And what about surfactants?

22 **A.** Surfactants -- I'm aware that surfactants have been used.
23 They are being used. There have been studies, some in the
24 mid-2000s as to how they can be used. I'm familiar with
25 probably the most recent application of surfactants at a BNSF

1 facility in Washington State, a state-of-the-art facility, to
2 do just the application of surfactants on moving coal trains.

3 And my assumption of 25 percent and 10 percent
4 effectiveness of surfactants was based on that body of
5 knowledge, which is considerable since on -- I mean, the
6 availability of the body of knowledge, which is considerable
7 since about 2005 or '6.

8 **MR. FELDMAN:** Your Honor, I move to strike. There is
9 no reference to anything other than one study and no showing
10 that he is an expert.

11 **MR. AKER:** He has been working with coal --

12 **THE COURT:** He provides an opinion in his report
13 about -- a slightly more clear opinion in his report about
14 surfactants, so I will let him -- he can testify a bit about
15 that.

16 **MR. FELDMAN:** Excuse me. May the reference to
17 "covers" be struck? There is zero foundation for that.

18 **THE COURT:** Yes.

19 There is going to be no more testimony about covers from
20 this witness.

21 **MR. AKER:** Thank you, your Honor.

22 **BY MR. AKER**

23 **Q.** And your opinion on surfactants as to their effectiveness,
24 can you provide that for the Court, please.

25 **A.** Well, I mentioned the surfactants are applied, but the --

1 getting surfactants to be even properly applied on these bread
2 loaf-shaped coal -- coal in a coal car is difficult. And that
3 is based on my review of how -- frankly one of the best
4 facilities that is designed to do that very thing is able to
5 even provide full coverage to a train car. And then, of
6 course, the surfactant doesn't survive these type of forces I
7 was talking when the rail car actually moves.

8 And the literature is quite clear that if you look at the
9 effectiveness as in known dust from these rail cars, let's say
10 100 miles or 200 miles away from where the surfactant is
11 applied, that you see a fair amount of even visible dust, not
12 to mention PM2.5, which you really can't discern.

13 **Q.** Okay.

14 **MR. FELDMAN:** I would move to strike the portion of
15 the witness's answer following the reference to the literature,
16 since there is none cited and none referred to in the answer.

17 **MR. AKER:** Your Honor, he is an expert witness who
18 has been doing this for 28 years. He is obviously familiar
19 with the literature.

20 **THE COURT:** I'm going to allow a little bit of
21 testimony about this. But it's apparent that Oakland needs to
22 go to school on the rules about use of expert witnesses. And
23 I'm hopeful -- perhaps you can consult a little bit with
24 Mr. Finberg or something over the lunch hour to streamline the
25 use of expert witnesses after lunch and make it go a little bit

1 more smoothly.

2 **MR. AKER:** Sure. Thank you, your Honor.

3 **BY MR. AKER**

4 **Q.** Can you just -- are you familiar with the South Coast Air
5 Quality Management District Rule 1158?

6 **A.** Yes, I am.

7 **Q.** And can you tell us what that covers?

8 **MR. FELDMAN:** Your Honor, excuse me. I don't believe
9 this is in his report. If I'm mistaken, I apologize.

10 **MR. AKER:** I think it was brought up in his
11 deposition, your Honor.

12 **THE COURT:** Is it in his report?

13 **MR. AKER:** Umm, I -- I really can't be sure, your
14 Honor.

15 **THE COURT:** Then ask him about opinions that he
16 offers that he has disclosed in his report. Okay?

17 **MR. AKER:** Okay.

18 **BY MR. AKER**

19 **Q.** Dr. Sahu, do you have a sense, the ESA report, as I
20 understand it, calculated approximately 20 tons per year of
21 additional fugitive dust, PM2.5?

22 **A.** PM2.5, yes. That was about -- about 20 tons after going
23 through some arithmetic errors and so on. It was in that
24 range, about 20 tons.

25 **Q.** Okay. And we have talked about your review of the ESA

1 calculations. What were your conclusions regarding those
2 calculations?

3 **A.** They were generally consistent. And what I mean by that
4 is, they were in the 20- to 25-ton per year range after I did
5 my supplemental, where I added that second staging facility,
6 the close-in staging facility. They were probably slightly
7 higher, around 23 to 25 tons if memory serves.

8 **Q.** Okay. And so -- so what was ESA's calculation of PM2.5?

9 **A.** About 20, something in that range.

10 **Q.** And so how close were your calculations to ESA's?

11 **A.** Because I was doing a verification calculation, I -- and
12 both of them, I think, are significantly underestimated. They
13 are very close. I would call them -- they are in the same
14 order of magnitude, basically, but they are -- they happen to
15 be also pretty close in absolute terms.

16 **Q.** Great. Thank you.

17 Do you have any sense based on your 28 years of experience
18 of how that -- I'll just say 20 tons per year of PM2.5 -- how
19 relatively large is that? Is it a big contribution, a small
20 one? How would you characterize it?

21 **MR. FELDMAN:** Your Honor, I object. There is no
22 scientific basis for "big" or "small."

23 **MR. AKER:** I'm asking him, based on his experience
24 can he --

25 **THE COURT:** Is this -- is this something that was

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1 disclosed in his report, whether it was big or small? Or was
2 the report just about checking ESA's calculations and verifying
3 them?

4 **MR. AKER:** Well, your Honor has asked questions about
5 how this falls within the -- how these calculations --

6 **THE COURT:** Was it disclosed in his report?

7 **MR. AKER:** I --

8 **THE COURT:** Was it part of the opinion that he
9 disclosed as offering?

10 **MR. AKER:** I don't think so, your Honor.

11 **THE COURT:** Okay. Then the objection is sustained.

12 **MR. AKER:** I have no further questions, your Honor.

13 **THE COURT:** Okay. Should we take our lunch break
14 now?

15 **MR. FELDMAN:** If you please, your Honor.

16 **THE COURT:** Sure. So why don't we resume at quarter
17 after 1:00, sharp. After lunch. Thank you.

18 **MR. FELDMAN:** Thank you.

19 (Whereupon at 12:24 p.m. proceedings were adjourned
20 for noon recess.)
21
22
23
24
25

SAHU - CROSS EXAMINATION / FELDMAN

P R O C E E D I N G S

JANUARY 19, 2018

1:18 P.M.

---000---

THE COURT: Ready? Set?

MR. FELDMAN: Not quite. There was actually, if you can believe it, a slight technical difficulty with one exhibit.

So I'm hopeful that the Court would permit us -- I've given it to the witness. I'm hopeful that your Honor will permit us to display it for you without necessarily having a hard copy of it.

THE COURT: That's fine.

MR. FELDMAN: This examination will take about five minutes.

THE COURT: Okay.**MR. FELDMAN:** I'm told and ordered.

Start?

THE COURT: Sure.CROSS EXAMINATION**BY MR. FELDMAN**

Q. You believe there were fundamental uncertainties relating to the OBOT project in the record before you, correct?

A. Yes. My opinion was that it was a conceptual level of design when the emission calculations were done by ESA.

Q. The threshold friction velocity calculation drives the calculation for staging, correct?

1 **A.** It is one of the important inputs into that calculation.

2 **MR. FELDMAN:** May I see Deposition 223, at 7 to 15.

3 (Document displayed.)

4 **BY MR. FELDMAN**

5 **Q.** (As read)

6 **"QUESTION:** And if you used controls for staging, what
7 controls would you have assumed?

8 **"ANSWER:** Very little, by way of controls, because any
9 controls that would have been applicable would have
10 been considerably deteriorated. So the effect would
11 have not been very much and it would still basically
12 show up in -- like I said, your threshold friction
13 velocity is what drives the calculation."

14 Does that remain your testimony?

15 **A.** Yes.

16 **Q.** You reached the same number for staging, the same exact
17 number for staging, as ESA because you assumed their
18 assumption -- you accepted their assumptions for threshold
19 friction velocity and wind and all other inputs, correct?

20 **A.** Sure. I used the threshold friction velocity of .54 that
21 they had used, as I discussed in my direct testimony.

22 **Q.** You accepted their assumptions for threshold friction
23 velocity and wind and all other inputs, correct?

24 **A.** I'm just confused about the wind part because we were
25 talking about staging a minute ago, right? That's -- given

1 that for staging, it was a threshold friction velocity. I just
2 want to clarify that's what you're talking about.

3 Q. Well, let's see if we can clarify it this way, Doctor.

4 Would you look at your opening report, Exhibit 499.

5 (Document displayed.)

6 A. Okay. And where am I going with that?

7 Q. If you'll look at the calculation for staging that appears
8 at 499.0044.

9 (Document displayed.)

10 Q. Do you see that?

11 A. I'm just trying to get there.

12 Q. Take your time, sir.

13 A. 44, you said, Counsel?

14 Q. I said 499.0044.

15 A. Yes, I'm there.

16 Q. This is in your report, correct?

17 A. Yes.

18 Q. This is an ESA spreadsheet, is it not?

19 A. Sure. I took ESA spreadsheets, and I decided what I
20 needed to change. I didn't want to replicate their
21 spreadsheet.

22 Q. So you attached to your report the ESA spreadsheet for
23 staging, correct?

24 A. Because I did not change anything. I did not want to
25 waste resources, and I accepted their assumptions. That's why

1 it is there.

2 Q. You and Mr. Chinkin wrote opening reports on the same day,
3 correct?

4 A. Well, they were submitted on the same day, but I was,
5 obviously, developing the report in the days prior to
6 submittal.

7 Q. You and Mr. Chinkin submitted opening reports on the same
8 day, correct?

9 A. That's what I remember. Yes.

10 Q. And there was nothing said about threshold friction
11 velocity in your report, was there?

12 A. Because I did not change that assumption. I focused on
13 the -- where I had disagreed with ESA. Those were the factors
14 I focused on.

15 Q. And that's absolutely not true, is it?

16 A. Well --

17 Q. The last thing you said is absolutely not true. You said
18 it this morning and you said it again. And that's not true, is
19 it?

20 A. Well, you have to -- when I wrote my report, there were
21 important things that I reviewed, and there were several
22 assumptions that I disagreed with ESA and others I didn't.

23 Q. Would you look, please, at your opening report on
24 Page 00010, subparagraph (d).

25 Do you have that?

1 A. Which page was that? 00010?

2 Q. 0010.

3 A. Sure.

4 Q. That's (d) for "meteorological data," correct?

5 A. Yes.

6 Q. You accepted their meteorological data, did you not?

7 A. Because I cross-checked the ten years of data and verified
8 that what they had assumed was still true. But I went through
9 the process of verifying that.

10 Q. For coal, would you look, please, at 0011. For coal
11 storage emissions, one of the parameters is wind speed, and you
12 accepted their wind speed calculation, did you not?

13 A. After verifying that what they had done was as
14 appropriate, sure.

15 Q. And you called it out in your report, did you not?

16 A. Because I had done some research into verifying that.
17 That's what I --

18 Q. And would you look, please, at Page 0009, sub (a).

19 Do you see that?

20 A. I'll get there.

21 Sure.

22 Q. And there you accepted their rail trip lengths, did you
23 not?

24 A. Sure. For the same reason, because I looked at, to see if
25 this should be different, and then I decided that from a

1 geometry and other standpoint, I didn't want to change it.

2 Q. So there were three things that you agreed that you
3 commented on in your report, correct?

4 A. Each having gone through a verification process.

5 Q. You believe that nothing in AP-42 applies to
6 non-stationary piles, right?

7 A. Well, this section we're talking about, 13.2.5, yes. I
8 still believe that.

9 Q. Would you look, please, at your declaration, which is
10 Trial Exhibit 728.0004, paragraph 9.

11 (Document displayed.)

12 Q. Did you say under oath:

13 "As a fundamental matter, I stress that none of
14 the AP-42 calculation approaches is applicable to
15 non-stationary piles period."

16 Did you say that under oath?

17 A. I did.

18 Q. And you and ESA -- and you because you just took ESA's
19 spreadsheets -- you and ESA applied AP-42 for the calculations
20 you're presenting to the Court, correct?

21 A. And recognizing that with AP-42 --

22 Q. Could you please answer my question.

23 A. Well, I have to give you the context. But I used the
24 calculations only because -- you still have to apply judgment
25 when you use AP-42. That's all.

SAHU - CROSS EXAMINATION / FELDMAN

1 **MR. FELDMAN:** Your Honor, would you direct the
2 witness to answer the question?

3 **THE COURT:** You need to answer his questions
4 directly. And then if you need to supply an explanation, you
5 can do that.

6 **THE WITNESS:** Well, would you repeat the question? I
7 will be happy to answer it exactly, please.

8 **BY MR. FELDMAN**

9 **Q.** The question was: You and ESA used AP-42 in the
10 calculations you presented to His Honor.

11 **A.** I did.

12 **Q.** Thank you.

13 For long-term rail transport, you assumed 1.25 pounds per
14 car per mile, correct?

15 **A.** Yes.

16 **Q.** And you referred to all the literature that you read for
17 that, right?

18 **A.** Yes. That's part of my experience.

19 **Q.** In fact, sir, look at your report on page -- this is your
20 opening report, sir, 499.0010.

21 **A.** Okay.

22 **Q.** You cited one piece of -- if you can call it "literature."
23 Do you see that?

24 **A.** Yes. Are you referring to the footnote on that page?

25 **Q.** I beg your pardon?

1 A. The footnote on that page?

2 Q. Yes.

3 A. Sure.

4 Q. You cited something called "RETAC minutes," right?

5 A. Yes.

6 Q. And those RETAC minutes have in them -- excuse me.

7 And the RETAC minutes are Exhibit 991, are they not?

8 A. I mean, I don't remember the exact number --

9 Q. It's in front of you. I actually handed it to. That's
10 the one I asked for the Court's indulgence on.

11 A. Oh, sure.

12 Q. Do you got that?

13 A. Yes.

14 Q. That's Exhibit 991.

15 A. Yes.

16 Q. Look at the second page, if my memory is correct.

17 A. I am there.

18 Q. And that's the calculation that's -- excuse me. That's
19 the data on which you based your 1.25-mile calculation,
20 correct?

21 A. For that footnote -- no. No. That data is not -- that
22 data would give you 1.5 miles.

23 Q. That's right. And then you reduced it?

24 A. I did reduce it.

25 Q. Just to cut it in half. Cut between the middle of what

1 ESA found and what you found, right?

2 **A.** No, 28 years of engineering experience is what went into
3 that, not just cut in half.

4 **THE COURT:** Excuse me. Could you slow down, please.

5 **A.** I disagree with your characterization of "just cut it in
6 half."

7 **BY MR. FELDMAN**

8 **Q.** Okay. That's what you base your calculation of 1.25 miles
9 on. It originally yielded 1.5 miles, and you reduced it to
10 1.25 miles, correct?

11 **A.** That was one of the data points.

12 **Q.** Is there any other cited there?

13 **A.** There is none cited because I don't cite everything in my
14 experience.

15 **Q.** Well, there are rules about that, and the Court will deal
16 with it.

17 Nothing in that report that you -- the RETAC report --
18 says that the rate of loss was constant, is there?

19 **A.** No. That was not the question that the gentleman at RETAC
20 was asked or was answering.

21 **Q.** Thank you.

22 That was Powder River Basin coal?

23 **A.** Sure.

24 **Q.** And what they were talking about was the loss of coal, not
25 emissions, correct?

1 **A.** They were talking about the coal loss from the top of the
2 rail cars. And you don't have loss from the top of the rail
3 cars unless they can be eroded and can disperse.

4 **Q.** But it wasn't about PM2.5 or PM10. It was total loss,
5 right?

6 **A.** It was visible loss, but the -- the PM2.5 was handled
7 through a speciation in that calculation later on.

8 **Q.** Would you -- would you agree with me that you have said
9 that the emission rates can vary during a trip like the one
10 from Utah to California, depending upon a whole number of
11 factors?

12 **A.** I have.

13 **Q.** Including wind?

14 **A.** Yes.

15 **Q.** Mechanical stresses?

16 **A.** Yes.

17 **Q.** Vibration stresses?

18 **A.** Yes.

19 **Q.** Individual coal lumps moving around?

20 **A.** Yes.

21 **Q.** Train speed?

22 **A.** Yes.

23 **Q.** And you used the constant rate?

24 **A.** I used that rate because it was conservative.

25 **Q.** Thank you.

1 Did you use a constant rate?

2 **A.** Yes.

3 **Q.** Would you agree with me that -- excuse me.

4 At Page 5-1 of the ESA report, there is a statement to the
5 following effect:

6 "This analysis would apply to any facility which
7 proposes such activities. ESA has analyzed the OBOT
8 facility as just one illustrative example of such a
9 facility."

10 Do you remember that?

11 **A.** Yes. I'm reading it here.

12 **Q.** You disagree with that statement, do you not?

13 **A.** No. The emissions part of it would be about the same,
14 where you put it, if the activities are the same. The impact
15 of the emissions in terms of concentration and harm, that would
16 depend on the context. But the emissions would be, if you have
17 the same type of activity, about the same.

18 **MR. FELDMAN:** May I see Page 170 of the deposition at
19 Line 3 through Line 13.

20 (Document displayed.)

21 **BY MR. FELDMAN**

22 **Q.** (As read)

23 **"QUESTION:** Excuse me, the last two sentences of the
24 first paragraph on 5-1?

25 **"ANSWER:** I got it. I understand. It says..."

1 And then it has the exact same language that I just read.

2 **"QUESTION:** Do you agree or disagree with the material
3 you've just read into the record?

4 **"ANSWER:** Disagree."

5 Was that your testimony?

6 **A.** Sure, because I was looking at it where the word
7 "analysis" is more than just emissions.

8 **Q.** Would you be surprised if your resume reflects that you've
9 testified 30 or 40 times in depositions and trials?

10 **A.** I didn't count them, but it's in the resume and you have
11 that. I didn't count them.

12 **Q.** That sounds right, doesn't it?

13 **A.** I just -- whatever is there. I'm not going to -- I don't
14 have a count.

15 **Q.** Well, do you have a count of the number of times you've
16 testified on behalf of someone who's accused of polluting,
17 right?

18 **A.** Would you say that again? I'm sorry.

19 **Q.** You have a count of the number of times you've testified
20 on behalf of someone who is accused of polluting, correct?

21 **A.** Well, I have had clients that were both industrial clients
22 and clients who have had permits and clients who are on the --
23 for the government. So I don't know which count you're talking
24 about.

25 **Q.** Have you ever testified on behalf of -- other than a

1 government agency or the Sierra Club or some other organization
2 that was claiming someone was polluting?

3 **A.** I have, sure.

4 **Q.** One time, right?

5 **A.** Well, it went to trial on that one time.

6 **Q.** One time?

7 **A.** I have had industrial clients for 27 years.

8 **MR. FELDMAN:** Would you direct the witness to answer
9 the question, your Honor?

10 **THE COURT:** I'm actually a little bit confused about
11 what the answer is. So why don't you ask the question again.

12 **BY MR. FELDMAN**

13 **Q.** You've testified one time on behalf of someone accused of
14 polluting, correct?

15 **A.** I don't remember how many times I've testified on behalf
16 of, as you put it, someone accused of polluting.

17 **Q.** Do you have a recollection of any more than one?

18 **A.** I don't right now.

19 **Q.** Thank you.

20 **MR. FELDMAN:** May I have a moment, your Honor?

21 **THE COURT:** Sure.

22 **MR. FELDMAN:** Thank you, your Honor. Nothing
23 further.

24 **THE COURT:** Okay. Any redirect?

25 **MR. AKER:** No, your Honor.

1 **THE COURT:** Okay. Thank you very much.

2 (Witness excused.)

3 **THE COURT:** Next witness?

4 **MR. AKER:** Your Honor, we call Dr. Nadia Moore.

5 **MR. MYRE:** Your Honor, we have a brief issue with
6 another exhibit that was disclosed this morning. That's
7 Exhibit 1069. It's the Public Health Panel report.

8 In this case it does not appear in any of her four
9 different reports that have come out, and I asked her at
10 deposition about all of the reports that she reviewed, and she
11 confirmed that it was not one of them. So I would ask that she
12 be precluded from testifying about that report or any of its
13 contents.

14 **MR. AKER:** We don't intend to ask her about that
15 report, your Honor.

16 **THE COURT:** In that case, your motion is denied.

17 **NADIA MOORE,**
18 called as a witness for the defendant herein, having been duly
19 sworn, testified as follows:

20 **THE WITNESS:** I do.

21 **THE CLERK:** Thank you. Please be seated.

22 And for the record, please state your first and last name
23 and spell both of them.

24 **THE WITNESS:** Hope Moore. H-O-P-E, M-O-O-R-E. I go
25 by Nadia, N-A-D-I-A, Moore.

MOORE - DIRECT EXAMINATION / AKER

1 **THE CLERK:** Thank you.

2 **DIRECT EXAMINATION**

3 **BY MR. AKER**

4 **Q.** Good afternoon, Dr. Moore.

5 **A.** Good afternoon.

6 **Q.** Can you tell the Court what your current occupation is.
7 Please.

8 **A.** Sure. I'm currently a consulting toxicologist.

9 **Q.** And what is your educational background as a toxicologist?

10 **A.** I have a Ph.D. in environmental toxicology from the
11 University of Washington.

12 **Q.** Okay. And how long have you been in the toxicology field?

13 **A.** Twenty-five years.

14 **Q.** When did you start in toxicology?

15 **A.** Pardon?

16 **Q.** When did you start? Twenty-five years ago?

17 **A.** Yeah.

18 **Q.** And your current employment?

19 **A.** My current employer is Veritox, Inc.

20 **Q.** What does Veritox, Inc.?

21 **A.** They are a health consulting company.

22 **Q.** I would like you just to describe to the Court briefly
23 what a toxicologist does.

24 **A.** Sure. So a toxicologist evaluates adverse health effects
25 on different organisms including humans and how to ameliorate

1 those effects.

2 Q. Okay. When you say "adverse health effects," what does
3 that mean?

4 A. So things that harm -- harm people or animals.

5 Q. And do you have a specialty within the field of
6 toxicology?

7 A. I've done a lot of inhalation toxicology work. In
8 toxicology you can look at different ways people are exposed.
9 So you might eat something or you might breathe something. So
10 I focus on what people breathe.

11 Q. Okay. I want to talk you to now about what we've been
12 calling "particulate matter" in this trial. Are you familiar
13 with that concept?

14 A. I am.

15 Q. And can you perhaps just briefly explain to the Court the
16 different types of particulate matter, to start out with.

17 A. Sure. So particulate matter is particles in the air, and
18 they can be made of a lot of different things. But they are
19 classified based on size. And so back when we first started
20 evaluating them, we looked at total suspended particulates, and
21 those are generally classified as larger in diameter. So I
22 think we talked about it earlier this morning. Particles are
23 classified by their diameter.

24 And so then as time went on, they speciated that into
25 different sizes of particles. So PM10 particles are particles

1 that are around -- the mean particle size is 10 microns or
2 less. And PM2.5, then, is the smaller size, so 2.5 microns or
3 less.

4 Q. Can you give the Court some idea of how small 2.5 microns
5 is.

6 A. Sure. So kind of the width of a hair is about 60 microns.
7 And so if you think about it, it's five or six PM10, and each
8 PM10 molecule is four. So if you think about piling up a
9 molecule -- or a particle that's two and a half microns in
10 diameter, it would take about 40 of them to be about the same
11 width as a human hair.

12 Q. Okay.

13 A. Very small.

14 Q. Can you see it?

15 A. You cannot see a single particle without a microscope.

16 Q. Okay. And how does coal dust relate to this whole thing?

17 A. So coal dust has all sizes of particulates. So PM2.5,
18 PM10, total suspended particulates.

19 Q. But coal dust is just sort of a species of particulate
20 matter?

21 A. It contributes -- it contributes to particulate matter.

22 Q. Okay. And did you, as part of your work in this case,
23 read the ESA report?

24 A. I did.

25 Q. And did you come to an opinion on the ESA report's

1 conclusions as to health impacts of particulate matter?

2 **A.** So the ESA report, there were conclusions, but their
3 overall sense was that PM2.5 can harm humans, right? No
4 threshold -- the mechanism. And so, yes, I agreed with that.

5 **Q.** Okay. And, if my recollection serves, the ESA report
6 talked about certain types of adverse health effects.

7 Do you recall that?

8 **A.** Yes. Adverse health effects of PM2.5?

9 **Q.** Yes.

10 **A.** Yes.

11 **Q.** Can you talk about that a little bit, what types of
12 adverse health effects.

13 **A.** Sure. So the adverse health effects that are associated
14 with increased -- breathing increased concentrations of PM2.5
15 are early deaths. So mortality and specifically
16 cardiovascular-related diseases. So heart attacks, strokes,
17 respiratory diseases, such as emphysema, COPD, exacerbation of
18 asthma. And so not necessarily deaths, but hospital visits, ER
19 visits associated with those type of endpoints.

20 **Q.** Okay. And are some "subpopulations," I'll use the word,
21 more susceptible to particulate matter, PM2.5, than others?

22 **A.** They are.

23 **Q.** Tell us about that.

24 **A.** So it's -- people with preexisting heart and lung disease
25 are more susceptible. And so along those lines, the elderly

1 are more susceptible because they have a susceptibility to
2 already have preexisting disease.

3 Children are more susceptible because children actually
4 breathe more air per body weight than an adult. So they
5 have -- and they spend more time outdoors as well. And they
6 also have a greater tendency to have asthma, so asthma attacks.
7 So those things make children more than susceptible.

8 There is also some literature that supports social
9 economic susceptibility.

10 Q. Tell us about that.

11 A. So people of low social economic status have less access
12 to health care. And so, again, that predisposes them to these
13 preexisting diseases that would be exacerbated by PM2.5
14 exposures.

15 Q. Are there statistics maintained as to the -- the degree to
16 which -- or the numbers of people that are affected by PM2.5?

17 A. Not specifically PM2.5.

18 Q. But what, the particulate matter?

19 A. So there are statistics based on, you know, what are the
20 asthma, the asthma attacks, the mortality rates and what --
21 what type of illness is associated with the mortality.

22 Q. Okay. Are you familiar with what we have been calling the
23 "NAAQS standards"?

24 A. I am.

25 Q. Can you tell us about that?

1 **A.** Sure. So the NAAQS are the National Ambient Air Quality
2 Standards. They are set by the U.S. EPA administrator as a
3 policy decision in order -- they are set at a concentration
4 that is neither more nor less stringent in order to protect the
5 population of the U.S.

6 **Q.** Okay. And what -- how do they develop those standards?

7 **A.** It's something we discussed at length with Dr. Maier two
8 days ago. So there is a lot of panels that get together and
9 put it together. And what they do is they review epidemiology
10 data. And the epidemiology is interesting. So epidemiology is
11 just the study of diseases among a population.

12 Okay. And so what they do is they look at groups of
13 people that are living in different areas, and they find out
14 all kinds of things about them and then they follow those
15 groups of people, hundreds of thousands of people over time,
16 and they look to see what the adverse health effects that they
17 suffered were. And they correlate that, then, to the
18 concentrations of the PM2.5 that -- where they lived. And what
19 they see, then, is areas of higher concentration have more
20 adverse health effects -- so heart attacks, strokes and
21 death -- than areas with lesser concentrations.

22 **Q.** Okay. And have the NAAQS standards over the years been
23 going up or going down? Can you talk about that.

24 **A.** Sure. So the NAAQS standards actually have been -- for
25 PM2.5 have come down. They were originally set at 15 in 1997,

1 and they came down to 12 in the latest ruling. And so the way
2 that they -- they do -- they do that is they look at
3 populations of exposure and effects to set them.

4 Q. Okay. And perhaps you could talk a little bit about how
5 those studies relate to the trends in ambient pollution.

6 A. Sure.

7 Q. Air quality.

8 A. So what the studies show? Is that what you're asking me?

9 Q. Yeah.

10 A. Okay. So the -- the epidemiology studies, what they show
11 is when you look at higher concentrations compared to lower
12 concentrations, there is a difference in disease. And so the
13 higher exposed have more than the lower exposed.

14 Now, what's interesting about air pollution research in
15 general, it really didn't start until we realized we had a very
16 large problem. And so actually it was the mid part of the 20th
17 century. There was a great London smog. It was very bad air
18 pollution, and they had 4,000 deaths that occurred over the
19 course of a week. And that really -- that opened the eyes of
20 the population that air pollution was very harmful. So harmful
21 that they killed -- that a lot of people died, and there was a
22 lot of hospital admissions during that time period.

23 And so after that time, really, the people started looking
24 at more exposed to lesser exposed concentrations, like I said,
25 right, and seeing that the more exposed had an effect. And

1 then in this 1971, they set the first NAAQS, and the air
2 concentration started to come down. So the air pollution
3 levels came down.

4 And as a result of that, the "exposure continuum," is what
5 they call it, changes. And so as you set an air quality
6 standard at one level, the air quality actually gets better for
7 the entire population as -- as the state struggled to meet that
8 NAAQS standard.

9 And so -- so what happens is as they continue to look at
10 lesser and lesser exposed populations, they continue to see an
11 effect. And the U.S. EPA then actually says that, okay, well
12 we see an effect at every concentration we evaluate. And
13 that's -- we may have heard the term, there is no discernible
14 threshold for the effects of PM2.5.

15 **Q.** What does that mean?

16 **A.** So when we look at the studies, we -- when we compare a
17 more exposed to a lesser exposed, it doesn't matter what the
18 concentration is. We see more disease, more illness in the
19 higher exposed than the lower exposed groups.

20 **Q.** Is it -- so maybe you can describe the adverse health
21 effects of PM2.5 as levels increase -- as concentrations
22 increase.

23 **A.** Sorry. Say that one more time?

24 **Q.** Can you describe for us the -- the degree to which
25 increases in ambient PM2.5 levels affect human health.

1 A. Sure. So the -- so the increases are associated with,
2 like, a constant level of increased disease. So one of the
3 most studied is just increased mortality. So early deaths that
4 are associated with PM2.5. So as you increase levels, the
5 baseline mortality rate increases on average, depending on the
6 study, about 6 percent.

7 Q. Is there any level, based on your investigation, where,
8 let's say we're at concentration levels above the NAAQS
9 standard, where increases do not result in increased numbers of
10 deaths or disease, that kind of thing?

11 A. Say that -- say that one more time?

12 Q. Is there any level -- what I'm trying to get at is, you
13 said as these ambient concentrations increase, so do the
14 adverse health effects, correct?

15 A. Right.

16 Q. Is there any level above the NAAQS where that sort of
17 levels off, it doesn't start increasing?

18 A. I haven't seen literature that shows that.

19 Q. Okay. So the more you raise ambient concentration levels,
20 the more adverse health effects.

21 A. Right. Well, remember, we start out with the great London
22 smog in the middle of 19th century. We have deaths. And so it
23 went down from there.

24 Q. So the relationship between increased PM2.5 levels and
25 adverse health effects, is that something that can be -- is it

1 proveable? Is it -- what's that based on?

2 **A.** So it's based on causation analysis. So -- so as a
3 toxicologist, there are many arms that factor into a causation
4 analysis. So one of them, kind of a fundamental tenet of
5 toxicology, is a dose response. As you increase the dose, you
6 see more of a response.

7 There is also biological plausibility. So we've done
8 molecular biology studies to show there is a mechanism that
9 mediates this. Does it make biological sense?

10 We also looked to see a temporality component. So the
11 exposure has to pre-date the disease, right? So we have
12 exposure, and then we have an outcome.

13 **Q.** Sure.

14 **A.** Trying to think. I lost my train of thought. But there's
15 a number of factors that go into that that prove causation.

16 **Q.** These adverse health effects you've been discussing, are
17 they based on scientific studies or what --

18 **A.** They are based on scientific studies. A weight of
19 evidence of the scientific studies that have been done.

20 **Q.** And what is the quality of these scientific studies in
21 your opinion?

22 **A.** The quality -- well, there's a lot of studies. So some of
23 them are high caliber and probably some of them are not. I
24 haven't gone through to weight of study on quality.

25 **Q.** Generally speaking, are they peer reviewed?

1 A. Yes.

2 Q. So I'm going to call it the "causal link" between
3 increased levels of PM2.5 and adverse health effects. Is that
4 a real cause and effect or is it just something they are
5 speculating about?

6 A. Well, I don't know. So the U.S. EPA has concluded there
7 is a causal link.

8 Q. Okay. And based on these studies?

9 A. On these studies.

10 Q. Let's talk for a little bit about -- actually, remind the
11 Court, what is the current NAAQS standards for PM2.5?

12 A. So it's 12 micrograms per cubic meter as an annual
13 average, averaged over three years, and 35 micrograms per cubic
14 meter for a 24-hour daily standard, the 98th percentile.

15 Q. Why the difference between 12 and 35? Why is the 35
16 higher?

17 A. The 35 is higher to allow for peaks to occur, but it's
18 important to realize that we can't live at 34 for very long,
19 right, because the -- overall, the average for the year has to
20 be 12 or less.

21 Q. Can you give the Court some idea of, you know, the -- this
22 concept of 12 micrograms per cubic meter. How much is that and
23 what do we breathe in?

24 A. Sure. So a microgram is 1 millionth of a gram, which is
25 hard to -- hard for me to comprehend. So -- so in looking for

1 analogies, a grain of salt that comes -- you know, just out of
2 a salt shaker, ranges from 60 to 200, maybe, micrograms. But
3 so it's less than -- less than a grain of salt, okay, is the
4 mass for 12 micrograms.

5 And for a cubic meter, that's -- the volume is one meter
6 by one meter by one meter cubed. And that's kind of a hard
7 thing for me to visualize. So as an inhalation toxicologist, I
8 think of how much air would you have to breathe to breathe in a
9 cubic meter. And on average, the U.S. EPA population survey
10 says it's about an hour and a half of breathing.

11 So over the course of breathing for an hour and a half,
12 you would breathe the equivalent mass of less than a grain of
13 salt.

14 Q. And I assume that's -- since you're breathing, you're
15 doing it 24 hours a day, right?

16 A. That's right.

17 Q. Okay. And these long-term effects of PM2.5 -- breathing
18 PM2.5 -- is that on an annual average? How do they come up
19 with that?

20 A. So the long-term effects, correct, are on an annual
21 average numbers.

22 Q. Do they also measure short-term effects?

23 A. They do.

24 Q. What type of effects -- you talked about the adverse
25 health effects. What types of health effects might we expect

1 to see based on the ESA's research for short-term effects?

2 **A.** So they are the same: Early deaths, cardiac events. So
3 heart attack, strokes, and exacerbation of respiratory disease.

4 **Q.** So people can die from this?

5 **A.** The studies link increased exposure with deaths.

6 **Q.** Okay. And you talked about some of the other adverse
7 health effects already, including increased hospitalizations,
8 things like that?

9 **A.** Correct.

10 **Q.** Again, this is a real causal link, according to the EPA?

11 **A.** Correct.

12 **Q.** So let's talk a little bit about concentration levels
13 below the NAAQS level -- let's take it at 12. Can you talk
14 about that.

15 **A.** So it's easier to kind of comprehend maybe what the EPA
16 did when they looked at the -- at the data. So when they did
17 their integrated science assessment, they looked at all of the
18 range of the data -- data that had been done. So all the
19 peer-reviewed studies.

20 **Q.** Let me stop you right there. Could you explain the
21 integrated science assessment.

22 **A.** Sure. Sure. So that was a process -- it's a document
23 that's generated by the U.S. EPA as part of their review of the
24 NAAQS. And so they integrate all the science that's been
25 generated since the last time they looked at the standard

1 level.

2 Q. Okay. And I interrupted you, but if -- go ahead.

3 A. So I think I was talking about how they set the NAAQS
4 level at 12 --

5 Q. Right.

6 A. -- and then how they evaluate below that.

7 So what they did is they evaluated the entire data set,
8 and they found a few key studies that they thought were very
9 robust. And they looked -- and what they decided was they saw
10 effects all the way down the concentration curve to lowest
11 exposure levels. But the -- so the way -- and the way they --
12 but they had to set a NAAQS standard that was protective of the
13 human health. And so what they ended up doing is looking to
14 see how -- how confident were they in the effects that were
15 observed in the studies at those lower levels, right?

16 And so -- can I digress just a minute to talk about --

17 Q. Absolutely.

18 A. So, again, it's hard to talk about -- how are you
19 confident -- more confident in some data than others, right?
20 It's all published, and it's all in a study. So you think
21 about all the people in this room. Maybe there's 100 people in
22 this room. And we want to know what the true average age is of
23 everybody in this room.

24 So if we take 10 percent of the population, so if there's
25 100 people, we take 10 of them, and we get the average age and

1 we have that number. How confident are we in that number
2 represents the average age of everybody in the room? Compared
3 to if we have half of the room and we take the average age,
4 we're more confident that that average age of more people
5 represents the true average.

6 So the -- the more population, the more confident we are
7 in the number.

8 And so that's what the -- essentially -- I mean, it's --
9 it's an analogy, but that's essentially what the U.S. EPA did
10 when they looked to set their NAAQS. So they looked at the
11 populations of exposure, and one of the key studies, the mean
12 average was 14 micrograms per cubic meter. So 50 percent of
13 the population was exposed to 14 micrograms per cubic meter or
14 higher.

15 What that meant is that 50 percent of the population was
16 also exposed to 14 or lower, right, lower than 14. And as we
17 get lesser and lesser concentrations, there's lesser and lesser
18 numbers of people that have been exposed.

19 And so what the U.S. EPA says is, well, we see effects at
20 this level, but we're not that confident and we're going to say
21 at the 25th percentile is where we really lose confidence. We
22 see an effect, but we're not confident that that's a true
23 effect. That's when they set the NAAQS at 12.

24 **Q.** Do you -- concentration levels below the NAAQS, are they
25 free from adverse health effects?

1 **A.** So the epidemiology studies have shown that there are some
2 effects at those lower levels.

3 **Q.** Okay. And what has the EPA concluded?

4 **A.** The EPA concluded that there was no discernible threshold,
5 that they can see affects at those levels.

6 **Q.** I wonder if we can have Exhibit 466 up.

7 (Document displayed.)

8 **MR. AKER:** Mitch, if we can go to 0074.

9 (Document displayed.)

10 **MR. AKER:** And highlight the -- yeah, right there --
11 column -- next -- column to the left.

12 **BY MR. AKER**

13 **Q.** Okay. You're familiar with the -- what's been called the
14 "final rule" issued by the EPA?

15 **A.** Yes.

16 **Q.** Can you tell the Court what that is.

17 **A.** That's the document that set the NAAQS levels and their
18 basis behind it.

19 **Q.** Okay. And in your report, you specifically quoted from
20 that. Do you recall that?

21 **A.** I do.

22 **Q.** And can you point the Court to the specific language you
23 were talking about.

24 **A.** I believe it's kind of in the middle. So the line that
25 starts with the word "2009a," the number.

1 Q. Okay. Going halfway down?

2 A. The sentence after that.

3 Q. Okay.

4 (Document highlighted.)

5 Q. Starts "to inform her"?

6 A. Yes.

7 Q. And to the end of the paragraph?

8 A. Sure. I don't know exactly.

9 Q. I wonder if you can read that.

10 A. Okay.

11 "To inform her," and her being the administrator
12 of the U.S. EPA, "decisions on an appropriate level
13 for the annual standard that will protect public
14 health with an adequate margin of safety, in the
15 absence of any discernible population-level
16 thresholds, the administrator judges that it is
17 appropriate to consider the relative degree of
18 confidence in the magnitude and significance of the
19 associations observed in epidemiology studies across
20 the range of long-term PM2.5."

21 And it goes on.

22 Q. And can you interpret that for us, translate that into
23 common English.

24 A. Sure. So this is what I was discussing earlier, where
25 they say there is no -- they haven't seen a threshold in these

1 studies, but they have to set a level. And so they are going
2 to set the level based on the confidence they have in the
3 studies that show an effect.

4 Q. Is your interpretation of this, the NAAQS rule, the 12,
5 would you conclude from that that below 12 there are no adverse
6 health effects?

7 A. It would be hard to quantitate levels.

8 Q. But can you say that there are no adverse health effects
9 below 12?

10 A. I cannot say that there are no adverse health effects
11 below 12.

12 Q. Okay. And have there been some studies that have looked
13 at adverse health effects from concentrations below the NAAQS
14 standard?

15 A. Yes.

16 Q. Can you tell us about that.

17 A. Sure. So -- so as -- like I said, as the concentrations
18 have gotten lesser in the ambient air, there is now more
19 populations that have been exposed to levels that are below the
20 NAAQS standards. And there are studies that show that there
21 are adverse health effects at levels below those standards.

22 Q. Can you describe one for the Court?

23 A. Yeah. So there is actually a -- two studies by -- by
24 Dr. Di, D-I. And she -- and she looks at -- or he looks, I'm
25 not sure -- looked at the Medicare cohort. So they --

1 Q. What's a cohort?

2 A. Just a group of people. So it's everybody they could find
3 that was on Medicare from the years 2000 to 2012.

4 And they looked at deaths. And they looked at where those
5 people lived, and they compared death rates. And they found
6 that the death rates were higher in areas with higher average
7 concentrations than those in lesser. And they specifically
8 subgrouped those into populations that lived in concentrations
9 that were less than 12 micrograms per cubic meter.

10 Q. Again, this is concentrations less than the NAAQS
11 standard, correct?

12 A. Correct.

13 Q. Was there some -- I think I wrote down the term -- the
14 population exposure group that the EPA studied, was there a --
15 sort of -- what range of exposures was -- and I'm looking at,
16 for the bottom range, the bottom of the range.

17 A. So the lowest exposure I believe they considered was
18 5.8 micrograms per cubic meter.

19 Q. Why is that?

20 A. That was the lowest -- so when they evaluated these
21 people, that was the lowest concentration where people lived
22 that were in the study.

23 Q. Okay. I'm going to put a demonstrative up on the board
24 here.

25 (Demonstrative displayed)

1 Q. Can you see that?

2 A. No.

3 Q. It will be on your screen too.

4 A. Okay. It's on the screen.

5 Q. Both ways.

6 (Document displayed.)

7 Q. So we put up your map of the OBOT terminal and kind of
8 surrounding areas.

9 Do you see that?

10 A. I do.

11 Q. So as part of coming up with your expert opinions in this
12 case, did you look at the -- this surrounding community?

13 A. I did.

14 Q. What did you do to investigate?

15 A. Well, so the -- the ESA report had mentioned that there
16 was a CARE community, so that's a community --

17 Q. Air?

18 A. Yeah, Community Air R... Evaluation.

19 Q. Yes.

20 A. Sorry. I spaced on that, the "R."

21 So anyways, I researched into what the CARE actually was.

22 Q. What did you find?

23 A. So that was an initiative that was started by BAAQMD, or
24 Bay Area Ambient -- no.

25 Q. Air Quality Management District.

1 **A.** Pressure.

2 So it was started by BAAQMD in the early 2000s to identify
3 populations that were at risk for health effects of air
4 pollution.

5 **Q.** What -- what factors went in to determining whether they
6 were at risk?

7 **A.** So they evaluated communities for susceptible populations,
8 so elderly as well as -- not necessarily elderly -- aged as
9 well as young populations, populations of -- that had childhood
10 asthmatics. And then they also looked at emissions of
11 pollutants. And so they looked for areas that were high in
12 pollution as well as high in susceptible populations.

13 **Q.** And West Oakland met those criteria?

14 **A.** They did.

15 **Q.** And what are the goals of the CARE program?

16 **A.** So the goals of the CARE program were to identify these
17 at-risk communities. I'll call them "at-risk communities."
18 And then to focus their mitigation techniques on those
19 communities that were most affected. And then the final goal
20 was to engage communities and stakeholders to do more for their
21 communities than BAAQMD could do alone.

22 **Q.** More in what sense than BAAQMD can do?

23 **A.** It just said to go beyond what BAAQMD could do alone.

24 **Q.** Okay. And that's a BAAQMD program?

25 **A.** That's a BAAQMD program, right.

1 Q. This board I put up here also talks about Cal EPA
2 disadvantaged community, and it's showing that would be
3 cross-hatched up there. Are you familiar with that?

4 A. I have read about that.

5 Q. Can you tell us about that?

6 A. So that's a different program that identifies
7 disadvantaged in a slightly different way, but looks at
8 pollution levels and impacts from disease based on pollution.

9 Q. Okay. And West Oakland, I assume, meets both the CARE and
10 Cal EPA thing?

11 A. So I haven't actually looked at the Cal EPA. I'm taking
12 your word on it.

13 Q. Okay. But you're familiar with the CARE program?

14 A. I am familiar with CARE.

15 Q. Do you have an opinion as to -- did you look into where
16 ambient air concentrations stand in West Oakland?

17 A. I did.

18 Q. Tell the Court about that. What did you do to investigate
19 that?

20 A. So I looked -- the Bay Area -- the BAAQMD has
21 post-concentration levels for the Bay Area, as well as the U.S.
22 EPA has a database of concentrations that they record for their
23 monitors across the nation.

24 Q. Okay. And what did you -- and these are actual air
25 monitoring stations?

1 A. That's correct.

2 Q. That are set up around West Oakland or the entire United
3 States?

4 A. So BAAQMD's air monitors would be across the Bay Area,
5 across their district. And then they actually send their data
6 to the U.S. EPA. So the U.S. EPA database has every monitor in
7 the nation.

8 Q. Okay. And then do they maintain some kind of inventory of
9 those results, or that's -- can you get access to those
10 results?

11 A. Right. Yes, yes.

12 Q. And so the PM2.5 concentrations in West Oakland, did you
13 look into what those historically have been?

14 A. I did.

15 Q. And can you tell the Court what you found?

16 A. So the concentrations in West Oakland, they actually
17 installed their monitor in the end of 2012. So data began in
18 2013 for the first full years of measurements.

19 So for '13, I don't know the exact numbers off the top of
20 my head. But it was above 12 for the -- for 2013 and 2014.
21 And '15, they were below 12.

22 Q. How far below?

23 A. One to two micrograms per cubic meter.

24 Q. Okay.

25 A. I'd have to look at the numbers.

1 Q. And have you looked at concentrations in later years.
2 2016 and 2017?

3 MR. MYRE: Your Honor, we object. 2017 numbers
4 obviously weren't before the City Council.

5 Frankly, we object and move to strike a number of things
6 that Dr. Moore has testified so far that were not in the ESA
7 report, were not in anything else before the City Council, and
8 we can address that specifically in a post-trial briefing, but
9 I wanted to lodge that as well.

10 THE COURT: That's fine. You can go ahead and
11 testify about -- in response to that question.

12 BY MR. AKER

13 Q. Okay. So when is the data available as to PM2.5
14 concentrations for a given year?

15 A. Sorry. Are you asking about specific concentration or?

16 Q. No. You -- how does the EPA or BAAQMD report these
17 concentrations?

18 A. So --

19 Q. I mean -- go ahead.

20 A. They report them in different mechanisms, I guess. BAAQMD
21 has a nice summary page where they give you the annual average
22 and what they call the "design value," which is the three-year
23 average which would compare it to the NAAQS directly.

24 Q. Okay. And so for a given year, let's say 2015, which you
25 talk about in your report, if you wanted to see the complete

1 results for 2015, when would that be available?

2 **A.** In the middle of 2016.

3 **Q.** Okay. So at the time the City Council enacted this
4 ordinance in June of 2016, what were the latest year they would
5 have available to them of that data?

6 **MR. MYRE:** Objection. Foundation.

7 **THE COURT:** Overruled. You can argue about it, how
8 relevant it is later.

9 **BY MR. AKER**

10 **Q.** Okay. What -- what would be the latest data they would
11 have had?

12 **A.** In 2016?

13 **Q.** Yeah.

14 **A.** It would have been 2015 data, the previous.

15 **Q.** Okay. And if we could --

16 **MR. AKER:** Mitch, if you could put up Trial
17 Exhibit 456?

18 (Document displayed.)

19 **MR. AKER:** Your Honor, this is a page from her expert
20 witness report, but I'm showing it not to introduce it into
21 evidence but just for illustrative purposes of the testimony
22 she was talking about. It's a table I'm going to refer to.

23 **MR. MYRE:** I don't know what he means, to present it
24 for "illustrative purposes."

25 If he's saying it's going to be a demonstrative that he is

1 going to put up, we won't have an objection. But, of course,
2 we object to the introduction of this report as hearsay.

3 **THE COURT:** You're using a page from her report as a
4 demonstrative?

5 **MR. AKER:** Yes, just to illustrate. If we could go
6 to Page 0028.

7 (Document displayed.)

8 **MR. AKER:** And, Mitch, if you could just blow up that
9 table there.

10 (Document enlarged.)

11 **BY MR. AKER**

12 **Q.** Okay. Do you recognize this?

13 **A.** I do.

14 **Q.** All right. Could you tell the Court what this is.

15 **A.** So these are just the average concentrations that were
16 recorded for West Oakland for the years 2013, '14 and '15.

17 **Q.** Okay.

18 **MR. MYRE:** Your Honor, I would renew the objection
19 that he is now offering this for the actual numbers. She said
20 she didn't know. It's not a demonstrative.

21 **MR. AKER:** She already testified as to the numbers,
22 your Honor. And this just puts specific numbers on the --

23 **MR. MYRE:** She just tried to confirm what it was.

24 **THE COURT:** I will allow it.

1 BY MR. AKER

2 Q. Okay. So this is the results of your investigation as to
3 ambient air concentrations of PM2.5 for these years?

4 A. That's correct.

5 Q. Okay. And for 2013, the 12.8 was over the NAAQS level,
6 correct?

7 A. It was over --

8 Q. 12.8.

9 A. It was over 12.

10 Q. Yeah. And for the other two years, it was -- it was
11 under?

12 A. It was under 12.

13 Q. Are you familiar with other, you know, standards for PM2.5
14 emissions that are -- have been promulgated by other groups
15 besides the U.S. EPA?

16 A. Did you mean emissions?

17 Q. Emissions. I'm talking about the --

18 A. They are concentrations.

19 Q. -- the World Health Organization. Are you familiar with
20 that?

21 A. Right. So emissions is usually a tons per year.

22 Q. Okay. I may not be using the correct terminology.

23 A. But for concentration levels for ambient air, yes, the
24 World Health Organization.

25 Q. And what is that?

1 A. 10.

2 Q. 10. Okay.

3 So for at least two of these three years, it's over the
4 WHO standard, correct?

5 A. That's correct. Over 10.

6 Q. And so is it reasonable to assume -- well, let me ask you.
7 What would be the impact, then, of a -- an increase in PM2.5
8 emissions from a new facility such as the OBOT facility?

9 MR. MYRE: Objection to "emissions."

10 A. Say that one more time.

11 BY MR. AKER

12 Q. What would be the impact of introducing a new source of
13 PM2.5 into Oakland?

14 A. You would increase the amount of PM2.5 in the air.

15 Q. And is there a potential for going over the 12?

16 MR. MYRE: Objection. Speculation. Foundation.

17 THE COURT: Overruled.

18 BY MR. AKER

19 Q. Go ahead.

20 A. So is there possibility that it can go over 12?

21 Q. Yeah.

22 A. Sure.

23 Q. Has the U.S. EPA tried to sort of qualitatively
24 characterize the health effects from PM2.5 above the NAAQS
25 level, above 12? Is there anything in the final rule that

1 discusses the degree of adverse effects? Is it minor or
2 significant or -- how did the U.S. EPA characterize it?

3 **MR. MYRE:** Objection. There was no opinion offered
4 on minor or significant.

5 **A.** Well, the --

6 **THE COURT:** Hold on a second.
7 Overruled. Why don't you ask the question again.

8 **MR. AKER:** Sure.

9 **BY MR. AKER**

10 **Q.** Did the -- in passing this final rule, did the U.S. EPA
11 characterize the sort of magnitude of adverse health effects
12 from increases above 12? Did they say it was trivial or
13 what --

14 **MR. MYRE:** Objection.

15 **THE COURT:** Overruled.

16 **BY MR. AKER**

17 **Q.** Go ahead.

18 **A.** Can I answer it?

19 **THE COURT:** Yes.

20 **A.** So they did characterize the particulate air pollution was
21 a substantial human health risk.

22 **BY MR. AKER**

23 **Q.** Was that their exact words?

24 **A.** Something close to that.

25 **Q.** Okay.

MOORE - CROSS EXAMINATION / MYRE

1 **A.** I can look it up in the final rule.

2 **MR. AKER:** Thank you, your Honor.

3 **THE COURT:** Okay. Any cross?

4 **CROSS EXAMINATION**

5 **BY MR. MYRE**

6 **Q.** Dr. Moore, as a toxicologist, you would agree with me that
7 consideration of air concentrations would be required for a
8 risk assessment for PM2.5, correct?

9 **A.** Yes. You would need to know the dose.

10 **Q.** And you're not aware of a single report that was submitted
11 to the City of Oakland in 2015 or 2016 that contained any
12 estimate of PM2.5 ambient air concentrations that could be
13 caused by the OBOT facility, correct?

14 **A.** As I sit here today or as I wrote my reports?

15 **Q.** As you wrote the reports that you provided the opinions in
16 this case.

17 **A.** No.

18 **Q.** No, I am correct there were none, correct? Well, strike
19 that. I'll ask it one more time.

20 When you provided your expert opinions in this case, you
21 were not aware of a single report that was submitted to the
22 City of Oakland in 2015 or 2016 that contained any estimate of
23 PM2.5 ambient air concentrations that could be caused by the
24 OBOT facility, correct?

25 **A.** That is correct.

1 Q. You discussed PM2.5, but you were not -- or I'm sorry --
2 strike that.

3 You discussed PM10 during your testimony, but you are not
4 offering any opinions about the potential health impacts caused
5 by PM2.5 -- or PM10, correct?

6 A. I am not offering any opinions on PM10.

7 Q. Thank you.

8 You testified about the ESA report, but you don't have an
9 opinion about the accuracy of any of the conclusions or
10 information in that report, correct?

11 A. Beyond the toxicology that they...

12 MR. MYRE: Please bring up Page 182, Line 5 through
13 14. This is from your deposition testimony in this case.

14 (Document displayed.)

15 BY MR. MYRE

16 Q. Was this the testimony you provided:

17 "QUESTION: Are you just stating things that ESA
18 concluded in their report or are you offering some
19 sort of opinion on the accuracy, adequacy,
20 completeness, anything else related to the report
21 itself?

22 "ANSWER: No. These were just statements that were
23 made by ESA in their report.

24 "QUESTION: And you don't have a view one way or the
25 other whether or not those were accurate?

1 **"ANSWER:** That's correct."

2 Was that your testimony?

3 **A.** That was, but I think we were talking about a specific
4 section of my report.

5 **Q.** Federal law instructs the EPA to set the NAAQS at a
6 standard which, if attained and maintained, provides an
7 adequate margin of safety requisite to protect the public
8 health, correct?

9 **A.** That's correct.

10 **Q.** In setting the NAAQS for PM2.5, it's your opinion that ESA
11 performed a comprehensive and reliable scientific risk
12 assessment, correct?

13 **A.** No.

14 **Q.** No, that's not --

15 **A.** I think you said ESA.

16 **Q.** Oh, thank you.

17 In setting the NAAQS for PM2.5, in your opinion, EPA
18 performed a comprehensive and reliable scientific risk
19 assessment, correct?

20 **A.** I do.

21 **Q.** You testified that exposure to PM2.5 could cause certain
22 potential adverse health effects, but isn't it a fact that
23 these specific potential adverse health effects were considered
24 by EPA in setting the NAAQS?

25 **A.** They were.

1 Q. You testified that because of its demographics, the
2 population of West Oakland is more vulnerable or sensitive,
3 but, again, the protection of what you've described as the
4 vulnerable population was accounted for in setting the NAAQS,
5 correct?

6 A. That is correct.

7 Q. You testified about past mitigation efforts that Oakland
8 has taken to reduce air pollution, but this information does
9 not inform the question of whether the transport of coal poses
10 an increased risk of health effects to the citizens of West
11 Oakland, correct?

12 A. Okay. That was long.

13 Q. Would you like me to ask the question again?

14 A. The first part of it. Sorry.

15 Q. You testified about past efforts Oakland has taken to
16 mitigate air pollution.

17 A. Correct.

18 Q. But this does not inform the question of whether the
19 transport of coal through an OBOT facility poses an increased
20 risk of health effects, correct?

21 A. That is correct.

22 Q. You testified that no threshold had been identified for
23 PM2.5, but you agree with me that there is some threshold
24 concentration for all particles, including PM2.5, correct?

25 A. That's correct. The threshold just hasn't been identified

1 yet.

2 Q. And what is known as a non-threshold approach can be used
3 to evaluate health risks when no defined threshold has been
4 identified, correct?

5 A. I --

6 Q. What is known as a non-threshold approach in your field
7 can be used to evaluate potential health risks for chemicals
8 where there is no defined threshold?

9 A. That is correct.

10 Q. And, in fact, it is your opinion that this approach used
11 by EPA to determine the NAAQS was the best approach that there
12 is available for analyzing PM2.5, correct?

13 A. Well, I think it was a through approach.

14 Q. Do you think it was the best approach that there is
15 available in your scientific field to perform that analysis?

16 A. Yeah, I would agree with that.

17 Q. EPA specifically considered concentrations as low as
18 10 micrograms per cubic meter, like the World Health
19 Organization standard that you testified about, when it set the
20 NAAQS, correct?

21 A. That is correct.

22 Q. If EPA lowered its standard in the future, isn't it a fact
23 that people across the United States would then be held to that
24 lowered standard?

25 A. Yes.

MOORE - REDIRECT EXAMINATION / AKER

1 **MR. MYRE:** Thank you.

2 **REDIRECT EXAMINATION**

3 **BY MR. AKER**

4 **Q.** As part of your work on this project, you were asked to
5 review the ESA report, correct?

6 **A.** That is correct.

7 **Q.** And you were asked to offer opinions on certain areas that
8 were discussed in the ESA report?

9 **A.** Say that one more time.

10 **Q.** You were asked to provide opinions as to the accuracy or
11 whatever, some of the conclusions ESA reached in their report,
12 correct?

13 **A.** Right. So I was -- I guess I was asked to do an
14 independent review and then evaluate on my review against
15 theirs, so I would phrase it a little bit differently.

16 **Q.** And we talked about the adverse health effects that the
17 ESA report discussed, correct?

18 **A.** Correct.

19 **Q.** And did you agree with the conclusions in the ESA report
20 as to the link between increased PM2.5 standards and adverse
21 health effects?

22 **A.** I agree with the link between -- between -- increased
23 PM2.5 concentrations and adverse health effects.

24 **Q.** You agree --

25 **A.** Yes, I do agree.

1 Q. You agreed with the ESA report?

2 A. Yes.

3 MR. AKER: Thank you, your Honor.

4 THE COURT: All right. You may step down. Thank
5 you.

6 (Witness excused.)

7 THE COURT: Okay. So what's the plan from here on
8 out? What's Oakland got?

9 MR. SIEGEL: So we have Dr. Zoe Chafe next.

10 THE COURT: Okay.

11 MR. SIEGEL: And that's about probably 12 to 15
12 minutes of testimony. That will be brief.

13 And then we have, I believe, Dr. Carlos Fernandez-Pello,
14 and then Mr. Sullivan is next.

15 Do you want time estimates for any of these, or just the
16 list?

17 THE COURT: No, I was kind of curious who was left.

18 MR. SIEGEL: Yes. And then is it --

19 MR. AKER: The video.

20 MR. SIEGEL: -- the video of Mr. Wolff.

21 THE COURT: I mean, I'm -- here is what I propose we
22 do. Why don't we take a ten-minute break, and then I'm
23 comfortable going to 4:00 o'clock. So if that means the
24 addition of a little bit of time to each of your clocks, that's
25 fine. We can go until 4:00 o'clock today. Okay? I think that

CHAFE - DIRECT EXAMINATION / SIEGEL

1 would amount to an addition of some time to each of your
2 clocks.

3 So why don't we resume at 2:30. Okay?

4 (Whereupon there was a recess in the proceedings
5 from 2:18 p.m. until 2:30 p.m.)

6 **THE COURT:** All right. Shall we proceed?

7 **MR. SIEGEL:** Yes, your Honor. Defendants call
8 Dr. Zoe Chafe.

9 **ZOE CHAFE,**

10 called as a witness for the defendant herein, having been duly
11 sworn, testified as follows:

12 **THE WITNESS:** I do.

13 **THE CLERK:** Thank you. Please be seated.

14 And for the record, please state your first and last name
15 and spell both of them.

16 **THE WITNESS:** Zoe Chafe. Z-O-E C-H-A-F-E.

17 **DIRECT EXAMINATION**

18 **BY MR. SIEGEL**

19 **Q.** Good afternoon, Dr. Chafe. Could you just briefly
20 describe your educational experience?

21 **A.** Sure. So I hold a BA in Human Biology from Stanford
22 University, and a Master's in Science in Energy and Resources
23 from UC Berkeley. A Master's in Public Health from
24 UC Berkeley, and a Ph.D. in Energy and Resources from
25 UC Berkeley.

1 Q. So you have written a dissertation. Could you briefly
2 explain what that is?

3 A. Sure. My dissertation focused on the public health
4 effects of exposure to PM2.5, especially ambient air pollution
5 coming from household burning of coal and wood and other solid
6 fuels.

7 Q. And what would you describe as your profession?

8 A. I'm a public health professional also working in
9 environmental studies and sciences.

10 Q. In what fields?

11 A. Interdisciplinary. So my training is epidemiology within
12 public health mostly and environmental health sciences.

13 Q. And what are you currently doing professionally?

14 A. I'm a post-doctoral research associate at Cornell
15 University.

16 Q. And working on what kind of projects?

17 A. I still work on the same issues that I worked on for my
18 dissertation. They've changed a bit, but still focusing on the
19 health effects of exposure to ambient PM2.5, and, in
20 particular, air pollution.

21 Q. And if I could call up, please, Exhibit 961. And you'll
22 have in your binder here a set of exhibits, and then they will
23 be displayed on the screen.

24 (Document displayed.)

25 Q. Do you recognize this Exhibit 961, particularly if you

1 turn to Page 3 of the exhibit?

2 **A.** I do.

3 **Q.** And what is it?

4 **A.** This is a report that I prepared for the City of Oakland
5 in my capacity as an employee with the City, and it's prefaced
6 by a memo by Council member Dan Kalb.

7 **Q.** And what -- you'll see that at the bottom of the page
8 there is a page reference that is different than what your
9 report says. That's what I will be referring to when I go
10 through the pages.

11 How did you access -- what did you do to prepare this
12 report?

13 **A.** To prepare this report, I reviewed the very large body of
14 evidence that was submitted to the City and became part of the
15 City record related to the Army base project. It was a
16 combination of online records that are available through the
17 City website as well as some paper records that I was given
18 during my employment with the City.

19 **Q.** And did you do anything else to prepare the report besides
20 look at the City's records?

21 **A.** I did, yeah. So in the case where I had questions or
22 needed additional information, I supplemented what I was given
23 through the City's record with additional outside research.

24 **Q.** If I could call your attention to, please, Page 114 of
25 this exhibit.

1 (Document displayed.)

2 **A.** Okay.

3 **Q.** So in the middle of the page, there you'll see a heading.
4 It should say "References to the Record" -- "References to the
5 Public Record."

6 If you just flip a couple pages, are these the records
7 that you referenced from the City's record?

8 **A.** That's correct. It's not an exhaustive list of what I
9 reviewed, obviously, but it is a list of records that were on
10 the public record that are referenced in this report.

11 **Q.** All right. And if I could just have you flip back to
12 Page 103, please, of the exhibit. And tell us briefly what
13 that is, heading at the top of the page?

14 **A.** This is a second section within the general "Works Cited"
15 or "References" section. And this is the list of outside work
16 beyond the City's record that I included in this report.

17 And, again, it's not an exhaustive list of everything that
18 I analyzed or summarized, but it's what's footnoted here in
19 this report.

20 **Q.** And approximately how many pages of work cited do you have
21 here?

22 **A.** I believe it's 13.

23 **Q.** And then did you actually read all of these works cited?

24 **A.** Yes, I did.

25 **Q.** All right. Let's just briefly discuss -- we had a lot of

1 testimony already from Dr. Moore, and I don't want to repeat
2 everything here that's from there, but if we could turn just to
3 Page 24, please, exhibit Page 24.

4 (Document displayed.)

5 **Q.** What is this bullet-pointed list at the top of the page at
6 Exhibit 24?

7 **A.** This is a fairly simplified list that lists some of the
8 major effects of human exposure to PM2.5, fine particulate
9 matter. Focused on a couple major categories, such as
10 respiratory and cardiovascular illness, asthma and also adverse
11 birth outcomes.

12 **Q.** If I could draw your attention to footnote 54, and the
13 point of that.

14 **A.** This footnote details a bit more about some of the adverse
15 birth outcomes. So this includes premature delivery, low birth
16 weight. And those are both things that would continue to
17 affect a child that -- over the course of its life, as well as
18 what's called early fetal loss or spontaneous abortion or
19 miscarriage.

20 **Q.** And I notice there is a lot of footnotes here. Is that
21 consistent throughout the report that you made references to
22 the works upon which you relied?

23 **A.** I did, yes. I would say actually it's probably a
24 simplified list because I couldn't include everything that I
25 reviewed. But I did attempt to include footnotes wherever

1 possible.

2 **Q.** And if you could flip back, please, just to Page 22 of the
3 exhibit, top paragraph.

4 (Document displayed.)

5 **Q.** What's the principal point, really, here of the top
6 paragraph of Page 22?

7 **A.** Well, there are two categories of exposure to PM2.5, fine
8 particulate matter that we talk in the scientific literature.
9 One would be the short term, so hours to days exposure. And
10 the other would be long term, and that's usually expressed in
11 months to years. So this is if you have higher levels of air
12 pollution or some exposure to air pollution, those are kind of
13 two main categories that studies are usually based on.

14 **Q.** And if you could turn to Page 26 of the exhibit, please.

15 (Document displayed.)

16 **Q.** We heard a lot of testimony about this just a few moments
17 ago, but -- so we're going to be brief here. But what is it
18 about particulate matter 2.5 that causes health and safety --
19 health harms?

20 **A.** So PM2.5, as the previous witness mentioned, is something
21 that's a bit difficult to wrap our heads around. It's
22 invisible to the naked eye. It's very small. I'd like to
23 underscore the point that the largest possible size of a
24 particle in this category would be 2.5 micrometers in diameter,
25 but it goes way down below that to very, very small particles.

1 What happens is that those small particles are able to
2 penetrate very deep within our bodies. So within our lungs,
3 even crossing the blood-brain barrier in some cases. And it
4 causes an inflammatory reaction across the body systems.

5 **Q.** If I could turn to your attention, please, to Page 41 of
6 this exhibit, near the bottom of the page, not the page itself,
7 but the page above the footnote sections.

8 (Document displayed.)

9 **Q.** And I'll ask you in a moment to flip over to the next
10 page, 42, but can you tell us whether your report addressed the
11 particular concerns regarding the neighborhood in which the
12 proposed coke and coal terminal is to be sited.

13 **A.** I did address this. Unfortunately, West Oakland and the
14 surrounding areas are subject to many existing stressors.
15 There is environmental pollution that exists already. Many
16 people in the population are of what you call "low
17 socioeconomic status." Many have underlying health burdens or
18 diseases that are the result of years of cumulative stress or
19 exposure to those environmental toxins that are already in the
20 environment. And, of course, there are people who are very
21 young and very old living in that area, too.

22 **Q.** All right. Thank you.

23 And then just briefly to Page 47 of the report. Not of
24 the report but of the exhibit, I should say.

25 And the -- the last paragraph above the footnotes here, if

1 you could just briefly address what this paragraph is about.

2 **A.** This is a paragraph that details some of the designations
3 that have been given to the neighborhoods around the area where
4 the proposed project would be. And here it lists, for example,
5 the California EPA has rated West Oakland as including some of
6 the highest census tracts in the state that are burdened by
7 pollution already. There are various ways of quantifying this,
8 the EnviroScreen tool, for example, is one. And as I mentioned
9 before, there is very significant sources of existing
10 environmental pollution there.

11 **Q.** All right. Thank you.

12 So now let's turn, please, back to Page 19 -- I'm sorry --
13 Page 21 of the exhibit.

14 The first sentence below Section 3.2. Are you there?

15 **A.** Yes.

16 **Q.** And that says -- if you could just read that first
17 sentence, please.

18 **A.** Sure.

19 "There is no safe level of exposure to fine coal
20 dust particles (PM2.5)."

21 **Q.** And we just heard testimony about that from Dr. Moore.
22 And you made a statement about that. Do you still stand by
23 that statement?

24 **A.** I definitely stand by that statement.

25 **Q.** And do you have -- what can you say about the basis for

1 the statement that there is no safe threshold?

2 **A.** There have been countless studies of ambient air pollution
3 and the effects of its exposure to the human body. And at this
4 point there is no evidence of a threshold of safe level of
5 exposure to ambient air pollution in the form of PM2.5.

6 I can't emphasize enough how well this has been studied
7 and continues to be studied in the form of new cohorts of study
8 subjects, and no evidence has been found of a threshold.

9 **Q.** But what about the -- you're familiar, I'm sure, with the
10 NAAQS, is that correct?

11 **A.** Yes, I am.

12 **Q.** And why does not the National Ambient Air Quality
13 Standard's threshold provide a -- I shouldn't call them a
14 "threshold." Why don't those standards provide a threshold
15 that provides safe levels?

16 **A.** Well, the -- the standards are set at a certain level
17 given scientific evidence, as we previously heard. And that is
18 done to -- to choose a level of risks at which that policy
19 decision is made, taking into account the many different types
20 of populations throughout our country.

21 I would, again, emphasize that it does not mean that there
22 is no level of harm below that standard that was set.

23 **Q.** So does it -- does this have anything to do with averages
24 that you could explain, versus individuals?

25 **A.** Sure. So epidemiology, which has been mentioned before,

1 is the population-wide study of the effects of pollutants on
2 groups of people, in this case. And so it's looking for trends
3 across time, across exposures, across people with very
4 different experiences in life and health burdens.

5 The actual exposure to an individual is going to be much
6 more informative about what that individual will experience.
7 So somebody who already has existing health problems will be
8 much more likely to experience some sort of adverse effect as a
9 result of exposure to PM2.5.

10 **Q.** All right. Thank you.

11 And then, just briefly, let's go to Page 73 of the
12 exhibit, an entirely different topic.

13 So Page 73 of the exhibit, there is a footnote 254 that
14 refers to a Jaffe study.

15 Did you find that?

16 **A.** Yes.

17 **Q.** So you'll see here that there is a comment about CCIG
18 noted.

19 Do you see that sentence?

20 **A.** I do see that.

21 **Q.** So have you had a chance to take a look at the issue here
22 in footnote 254 and determine whether CCIG's comments or their
23 critique was well taken?

24 **A.** Yes. This refers to the Professor Jaffe studies in 2015
25 in Washington State. I obviously reviewed this during the

1 course of preparing my report, and I've re-familiarized myself
2 with it recently.

3 I spoke to Professor Jaffe during the course of any
4 research and --

5 **MR. SWEDLOW:** Your Honor, I would object, only
6 because this witness isn't an expert witness. She's just
7 testifying about the report that was submitted for the City
8 Council. So the fact that she talked to somebody outside of
9 the report context isn't relevant.

10 **THE COURT:** Well, the fact that she talked to him is
11 okay. I mean, I suppose that whatever he said to her is
12 probably hearsay. But the fact that she talked to him is
13 probably okay, right.

14 **MR. SWEDLOW:** My objection is slightly different.
15 Whatever this person said to her was not before City Council,
16 and she's not an expert in this case. She's only testifying
17 about her report as part of the record.

18 **THE COURT:** I understand. Okay. Objection is
19 overruled.

20 **BY MR. SIEGEL**

21 **Q.** Just if you could continue, if you recall where you were.

22 **A.** Sure. So there were a few concerns raised about the
23 study. One was that the measurement instruments used to
24 understand the ambient air pollution, the PM2.5 and other air
25 pollutants coming from these trains was not properly

1 calibrated.

2 In fact, in this study the authors very carefully detail
3 the way that they have calibrated the equipment. The type of
4 equipment they use needs to be calibrated in many different
5 circumstances, and they use something called a "federally
6 equivalent method," which is approved by the EPA to do that
7 calibration. And they report the findings and their
8 calibration in the body of the study itself.

9 Another one is that I believe there was -- there was some
10 interest in knowing what fraction of the PM2.5 observed was
11 coming from diesel emissions versus coal dust. And this is
12 also very well detailed in the study, and they use two
13 different methods to try and discern that, that fraction. One
14 is by comparing what's called "black carbon," which is
15 something that's considered a marker for soot, from diesel
16 emissions to PM2.5. And that fraction changes whether it's --
17 what they call a freight train versus a coal train. So they
18 were actually able to find more dust originally from coal
19 trains than from other freight trains.

20 **MR. SIEGEL:** Okay. Thank you.

21 **THE WITNESS:** You're welcome.

22 **THE COURT:** That's it?

23 Could I follow up with a couple of questions? One part of
24 your report that Mr. Siegel didn't ask you about that I -- I'm
25 perhaps most focused on is Section 4.2, "Health Effects of Coal

1 on Adjacent Communities." And in particular I'm looking at
2 Trial Exhibit Page -- the page number is down at the way
3 bottom -- 45.

4 **THE WITNESS:** Okay.

5 **THE COURT:** And what you've testified about so far is
6 for the most part sort of generally the effects of PM2.5 on
7 people. And here is where you talk about the possible effect
8 of PM2.5 emissions on people in West Oakland from the project.

9 And I'll read a couple of statements from this page,
10 Page 43 -- sorry, Page 45 of the Trial Exhibit.

11 "There is a high likelihood that adjacent
12 communities will experience very high peaks of PM2.5
13 in their neighborhoods at concentrations that could
14 cause adverse health effects."

15 And then down towards the bottom of that page:

16 "Previous studies done in other parts of the U.S.
17 found that people who live near coal facilities but do
18 not themselves work in mines and other coal-handling
19 facilities, may increase higher mortality rates
20 related to heart, respiratory and kidney problems."

21 Can you describe to me the basis you had for drawing those
22 conclusions. I know they are somewhat equivocal and you use
23 words like "could" and "may," but I was just curious if you
24 could describe in a little more detail the basis for your --
25 the conclusions reflected in those two statements.

1 **THE WITNESS:** Sure. So I'll take the first one
2 first, which is the piece of PM2.5 and the neighborhoods. So
3 this is based on the few studies that have been done that look
4 at potential effects of coal dust coming off of trains, and
5 understanding that those trains would be passing very close by
6 to residential neighborhoods.

7 Not only residential neighborhoods, but also recreational
8 areas, such as the paths that run along the Bay Bridge and will
9 be used more and more in the future by people that are included
10 in susceptible populations. So this is somewhat of an
11 extrapolation because we don't have any data yet on what would
12 happen if a train went through there, noting that those
13 populations that are closest to the train tracks are often some
14 of the most vulnerable.

15 The second part that you pointed out, which was
16 footnote 150 on Trial Document 46, Page 46, is an interesting
17 set of studies from West Virginia where there is coal dust in
18 the area. And so the researchers went through and tried to
19 understand what the more generalized effects were on the
20 population, not necessarily of people who were themselves
21 actively working in an area with coal dust, but those in the
22 area around. And they did find health effects there.

23 **THE COURT:** Okay. But you said they found health
24 effects there. But your report says that:

25 "Previous studies done in other parts of the U.S.

1 found that people who live near coal facilities but do
2 not themselves work in mines or in other coal-handling
3 facilities may experience higher mortality rates."

4 Can you tell me a little bit more about why you have used
5 the word "may"?

6 **A.** I think it's based on the fact that there haven't been
7 very many studies done in this area. It's actually been
8 difficult to find equivalent cases that have been thoroughly
9 studied in ways that I would think are acceptable from a public
10 health research perspective.

11 So I think this is indicative. There is nothing else to
12 show that there are no effects in those communities. The
13 studies that have been done are showing health effects.

14 **THE COURT:** And then bouncing back to the first
15 sentence that I read, which is:

16 "There is a high likelihood that adjacent
17 communities will experience very high peaks of PM2.5
18 in their neighborhoods, at concentrations that could
19 cause adverse health effects."

20 Could you explain why you chose to use the word "could" in
21 that sentence.

22 **A.** Yeah. It's a good question. I think it's probably
23 because, again, of the lack of particular data that we have for
24 this. At the time that I reviewed many of these documents, it
25 was a little bit unclear exactly how many coal trains would be

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1 coming through and what, if any, methods would be used to
2 suppress coal dust that might be coming off of them.

3 So, you know, I stand by the statement that there is a
4 high likelihood, I think, given the range of estimates of the
5 amount of coal that could be shipped through there and the type
6 of trains that be would used, that they could experience very
7 high peaks of PM2.5.

8 If those high peaks were experienced, then we would expect
9 to see health effects from them. It's more about the
10 underlying data rather than the relationship between those
11 peaks of PM2.5 and the health effects that would follow.

12 **THE COURT:** Okay. That's fair enough. Thank you.

13 Go ahead.

14 **CROSS EXAMINATION**

15 **BY MR. SWEDLOW**

16 **Q.** Good afternoon, Dr. Chafe.

17 **A.** Good afternoon.

18 **Q.** If we could look quickly at Exhibit 108, the second page,
19 under the part that says "Timing and Deliverables."

20 Is it your understanding that your -- the goal of your
21 report was to support the application of public health or
22 safety regulations pursuant to Section 3.4.2 of the Development
23 Agreement?

24 **A.** As written here, yes. You will notice at the beginning of
25 the sentence, it says "If applicable." So this was the

1 guidance I was given at the beginning of the project.

2 Q. With respect to the work that you did in the report that
3 you submitted, you didn't do any air quality modeling to
4 determine the concentrations or relative concentrations of
5 PM2.5 from the anticipated OBOT facility, did you?

6 A. No, I myself did not.

7 Q. You didn't do any air quality modeling for concentrations
8 of PM10 or any other potential contaminant from the anticipated
9 OBOT facility, did you?

10 A. No.

11 Q. Your report doesn't contain a risk assessment for any of
12 the health or safety risks that you identified associated with
13 a potential coal facility at the OBOT terminal, does it?

14 A. Not in the formal sense of a risk assessment, no.

15 Q. You didn't compare the anticipated emissions either by
16 quantity or concentration of coal and any other bulk commodity
17 that may be transported at this facility, is that correct?

18 A. Could you repeat the first part of your question?

19 Q. You didn't do any quantitative comparison by quantity or
20 concentration for the emissions from a bulk material that
21 wouldn't be coal and would be coal at this facility?

22 A. No, not myself. I don't believe there was sufficient
23 information given to do that.

24 Q. You didn't compare the anticipated concentrations of PM2.5
25 to the CEQA threshold, did you?

1 **A.** No.

2 **Q.** You didn't compare the anticipated concentrations or
3 emissions to the BAAQMD limits, did you?

4 **A.** No. I attempted to gain information from BAAQMD but
5 wasn't successful.

6 **Q.** You didn't compare the concentrations or quantities of
7 emissions to the EPA New Source significant levels, did you?

8 **A.** No.

9 **MR. SWEDLOW:** With respect to the permit requirements
10 for the facility, could we put up T-604 on the first page?

11 (Document displayed.)

12 **MR. SWEDLOW:** I guess it would be the second page.

13 (Document displayed.)

14 **MR. SWEDLOW:**

15 **Q.** These are the "Standard Conditions of Approval and
16 Mitigation Monitoring and Reporting Program" for the OBOT
17 facility.

18 Have you seen this before?

19 **A.** I believe that I scanned this at the early part of my
20 research, but I can't be 100 percent sure.

21 **Q.** For purposes of the risks that you identified associated
22 with a coal facility, did you consider the permit requirements
23 on Page 604.6 relating to rail emissions?

24 **A.** Is that the second box on the page?

25 **Q.** The second one. It says:

1 "The ground lessee of the West Gateway and the
2 railroad right-of-way shall develop for City review
3 and approval a criteria pollutant reduction program
4 aimed at reducing or offsetting emissions from its
5 rail-related and maritime-related operations."

6 Did you consider any limitations on emissions that might
7 be placed on the rail activities through the City approval
8 process for this project?

9 **A.** On the rail? This was not a specific focus of my report.

10 **Q.** If we can go to Page 28 of this document.

11 (Document displayed.)

12 **Q.** There is a section on Page 28 referring to greenhouse gas
13 permit requirements. Here it says:

14 "The project applicant shall return a qualified
15 air quality consultant to develop a greenhouse gas
16 reduction plan for City review and approval."

17 Did you consider, as part of your opinion, that the City
18 could either approve or disapprove of the greenhouse gas
19 reduction program submitted by the applicant as part of your
20 risk identification?

21 **A.** I believe -- did you say "return" or "retain"? Because
22 the copy I have here says "retain."

23 **Q.** Does that change your answer at all?

24 **A.** No, I haven't thought through my answer. I was just
25 trying to follow you.

1 So what's the question?

2 Q. Did you consider the fact that the City had to approve the
3 applicant after submitting a greenhouse gas reduction program
4 when you were identifying the risks associated with a coal
5 facility?

6 A. No. This was not a major part of my report.

7 Q. Did you consider any of the permit restrictions and
8 requirements that existed with respect to this facility when
9 you were identifying potential risks that could exist at the
10 facility?

11 A. I -- I reviewed these in passing, but they were not a
12 major part of the work that I did.

13 Q. If we could you go to Page 49, with respect to fire
14 safety.

15 (Document displayed.)

16 Q. Did your report consider the fact that there were fire
17 safety approvals required before issuing permits for this
18 facility?

19 A. This, I do remember reviewing. So, yes, I did consider
20 it.

21 Q. Excuse me. You said you did or did not?

22 A. I did, yes.

23 Q. To what extent did you consider the fact that the project
24 applicant had to submit a fire safety plan to the planning and
25 zoning division for fire services for review and approval when

1 identifying the risks associated with fire and explosion?

2 **A.** It was something I was aware of when we were preparing the
3 report.

4 **Q.** Did you incorporate the fact that the City had approval
5 power over the fire safety plan when identifying the risks
6 associated with fire and explosion?

7 **A.** I wouldn't say that that is an aspect that I was
8 familiarized with during my time at the City.

9 **Q.** So you would not?

10 **A.** No, that is not something I was briefed on beyond what's
11 written here.

12 **Q.** If we can go to Page 4.

13 (Document displayed.)

14 **Q.** Page 4 and Page 5 lists about 20 different BAAQMD approval
15 categories. Did you consider any of the prerequisite BAAQMD
16 approval categories when you identified the risks associated
17 with the potential facility at the OBOT?

18 **A.** As I mentioned before, I tried to get information from
19 BAAQMD about their approval process and what influence that
20 might have had on emissions and was not successful. So beyond
21 what's written on here, I didn't incorporate any additional
22 information.

23 **Q.** Did you quantify any dust exposure levels for any resident
24 of West Oakland from the proposed terminal?

25 **A.** So you used the word "quantify." I don't believe I was

1 given sufficient information to do that for any specific
2 resident in West Oakland, no.

3 **Q.** Did you measure or estimate the incremental impact on the
4 max concentrations for any resident of West Oakland?

5 **A.** No, because that would have required air pollution
6 monitoring that I didn't have access to -- or sorry -- air
7 pollution modeling.

8 **Q.** Did you identify the frequency or level of risk associated
9 with any of the fire or explosion incidents that you identified
10 as it would relate to the potential OBOT facility?

11 **MR. SIEGEL:** Objection. It goes beyond the scope,
12 your Honor.

13 **THE COURT:** Overruled.

14 **MR. SWEDLOW:** What?

15 **THE COURT:** I said, "Overruled."

16 **MR. SWEDLOW:** Okay.

17 **THE WITNESS:** Could you repeat the question?

18 **BY MR. SWEDLOW**

19 **Q.** Yes. Did you quantify the risk associated with any of the
20 fire or explosion incidents that you identified as it would
21 relate to the OBOT facility?

22 **A.** So I identified a few incidents that occurred at other
23 facilities. I did not quantify the risks associated with those
24 incidents, no.

25 **Q.** Is there any mathematical or quantitative way to relate

1 your identification of other fires to the anticipated
2 operations at the OBOT facility within your report?

3 **A.** The first part of your question was whether I could relate
4 it to?

5 **Q.** Whether you could relate it quantitatively to the risk at
6 the anticipated OBOT facility.

7 **A.** No, I don't believe there was sufficient information given
8 to be able to do that.

9 **Q.** With respect to greenhouse gas, I believe your report
10 identified a very, very, very small increment of increase in
11 potential greenhouse gases from the coal that would be
12 transported through this facility, is that correct?

13 **A.** Actually, my finding was that relative to Oakland's
14 Climate Action Plan, it was quite a large increment.

15 **Q.** Would that greenhouse gas emission take place in Oakland
16 or anticipated to be in China and Japan?

17 **A.** The emissions would occur in China, assuming that there
18 was no combustion occurring as a result of an incident at the
19 terminal itself. There is potentially a way that those
20 emissions would be factored into something like the Oakland
21 Climate Action Plan, depending on where those emissions were
22 counted.

23 **Q.** Did you quantify the percentage of those emissions in
24 China and Japan that would make their way back to West Oakland
25 and impact air quality in West Oakland?

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1 **A.** Not in terms of a specific concentration, no.

2 **Q.** In terms of a general concentration?

3 **A.** I did analyze the proportion of some pollutants in the Bay
4 Area that come from overseas pollution.

5 **MR. SWEDLOW:** Thank you. No further questions.

6 **THE COURT:** I forgot to ask you one question.

7 I believe that one of the other things that you said in
8 your report was that aside from the PM2.5 there are certain
9 toxins from coal dust that could be dangerous to members of the
10 community like arsenic. And what were some of the others?

11 **THE WITNESS:** So lead, cadmium, mercury. Those are
12 some others.

13 **THE COURT:** And to what extent were you able to
14 assess the magnitude of the -- either the amount of those
15 toxins to which members of the community would be exposed or
16 the magnitude of the danger from those toxins?

17 **THE WITNESS:** It's a difficult question to answer.
18 It's one that I spent a lot of time thinking about, and, in
19 general, I approached it from two different ways. One is
20 exposure through coal dust itself, and the other is through
21 combustion emissions, if there were to be an incident where
22 coal was burned at the facility. So as a result of an
23 explosion or a fire either on the train cars or at the facility
24 itself.

25 In the event of the latter, it's well documented that

1 there are carcinogenic properties to coal combustion emissions.
2 So some of those trace metals, such as lead and mercury, are
3 what we call "liberated." So they are unbound and concentrated
4 when the coal is burned. And so those would be direct
5 emissions that would affect the West Oakland population.

6 For the coal dust itself, it depends on a lot of factors.
7 The coal dust, if it accumulates on soil and then is exposed to
8 elements such as water, there is evidence that leaching can
9 occur. But it depends on sort of the concentrations of
10 build-up and whether the -- those concentrations are in great
11 proximity to the population. So in other words, in someone's
12 backyard garden versus more in a general area and coming
13 through the waterways.

14 **THE COURT:** And did you make any effort to compare
15 the risk on that last -- on this last issue to the risk
16 associated with shipping other types of cargo through the
17 terminal?

18 **THE WITNESS:** No, I didn't feel I had sufficient
19 information about that. I think in my deposition I was asked
20 about a few other potential commodities, such as baby formula
21 and cork. And I just don't have the expertise or the -- I
22 haven't done the research to understand what the contamination
23 would be in those instances.

24 **THE COURT:** Last question. Is my old friend Joel
25 Moskowitz still at the public health school?

1 **THE WITNESS:** The name sounds familiar, yes.

2 **THE COURT:** But you don't know him?

3 **THE WITNESS:** I don't know, no.

4 **THE COURT:** I was a lawyer for the City of
5 San Francisco and I was defending a challenge to an ordinance
6 requiring retailers to disclose information about the health
7 effects of cell phone use, and I worked with Joel on that.

8 **THE WITNESS:** Now I remember, yes. He is definitely
9 still there.

10 **THE COURT:** Cell phone guy.

11 Okay. That's all I have. Anything else from anyone?

12 **MR. SIEGEL:** No, your Honor.

13 **THE COURT:** Okay. Thank you very much.

14 (Witness excused.)

15 **MR. COLVIG:** The City would call Dr. Fernandez-Pello,
16 who allows us to call him Dr. Pello.

17 And I put a Post-It in everybody's binder just to help us
18 get quickly to a page that I will be citing to.

19 **THE COURT:** You bet.

20 **MR. COLVIG:** After yesterday's binder blunders, I
21 thought I would go the extra mile in the other direction.

22 **CARLOS FERNANDEZ-PELLO,**
23 called as a witness for the defendant herein, having been duly
24 sworn, testified as follows:

25 **THE WITNESS:** I do.

1 **THE CLERK:** Adjust the microphone directly in front
2 of you. Please state for the record your first and last name
3 and spell both of them.

4 **THE WITNESS:** Carlos Fernandez-Pello. C-A-R-L-O-S.
5 F-E-R-N-A-N-D-E-Z. P-E-L-L-O.

6 **THE CLERK:** Thank you, your Honor.

7 **DIRECT EXAMINATION**

8 **BY MR. COLVIG**

9 **Q.** Good afternoon, Dr. Pello. Could you please provide us a
10 very brief sketch of your educational background.

11 **A.** Yes. I obtained a degree, a Ph.D. degree, in engineering
12 sciences from the University of California San Diego.

13 After that I went to Harvard University as a
14 post-doctorate fellow in the Physics Department.

15 And then at Princeton University, I was a junior faculty
16 in mechanical engineering. And since 1980, I have been a
17 professor at the Department of Mechanical Engineering at the
18 University of California Berkeley.

19 **Q.** A very fine school, I might add.

20 Are there areas in which you consider yourself an expert?

21 **A.** Yes. I'm an expert in combustion with an emphasis in
22 fire, specifically ignition and smoldering, and fire spread and
23 explosion, solid combustible fuels.

24 **Q.** Have you authored publications in this area?

25 **A.** Yes. I have over 200 peer-reviewed publications and a

1 similar number in one or another technical units.

2 Q. Have you authored a book?

3 A. Yes. I have coauthored a book in combustion.

4 Q. Do you teach?

5 A. Yes. I teach in the Department of Mechanical Engineering
6 at the University of California Berkeley. I teach courses in
7 heat transfer, thermodynamics and combustion.

8 Q. Can you give us a brief idea of some of the clients you've
9 worked for.

10 A. I have worked for NASA, the Department of Defense, the
11 Department of Energy, PG&E, Southern California Edison --

12 Q. That's probably enough. Thanks.

13 Have you been retained to assist in determining the cause
14 of fires before?

15 A. Yes, sir. I have been retained. I have testified maybe
16 around 30 times in these issues.

17 Q. Have you ever testified in a trial about coal combustion
18 issues?

19 A. Yes, sir.

20 Q. Did that involve the Los Angeles Export Terminal?

21 A. Yes, sir.

22 Q. Can you briefly tell us what information you reviewed to
23 prepare for your testimony.

24 A. Well, there is a lot of material. I reviewed the ESA
25 report. I reviewed the HDR, the design review.

1 Q. The Basis of Design?

2 A. Yes, sorry. Basis for Design.

3 The Cardno report. I've reviewed Dr. Rangwala's report,
4 the last report, the TLS report.

5 Q. Did you look at the ESA report?

6 A. Yes, sir.

7 Q. Okay. How does coal compare to other substances in terms
8 of fire and explosion danger?

9 A. Well, coal is a complex fuel in that it has many different
10 attributes. It's a fuel that has the capability of
11 self-ignition and spontaneous combustion. It produces dust
12 that is combustible and can cause explosions. It may release
13 methane that, together with the coal dust, is explosive and
14 enhances the possibility of explosion. It is easier to ignite
15 than many other solid fuels because it's a porous material and
16 can initiate the smoldering and then transition into flaming.
17 So it can ignite at relatively low temperatures.

18 At the same time it's very difficult to -- once it ignites
19 and burns, it requires special equipment to fight fires from
20 coal.

21 Q. How hot does coal burn in relation to other substances?

22 A. In general, coal burns hotter. I mean, in fact, that's
23 why it's used in power plants for power generation.

24 Q. How hot does coal burn compared to grain?

25 A. It's approximately twice.

1 Q. You mentioned that coal can present a problem with
2 explosion. Why does that happen?

3 A. Well, as I mentioned before, one of the characteristics of
4 coal is that it produces dust, and very fine dust mixed with
5 air behaves like a gaseous fuel. So if ignited and the
6 conditions are appropriate, it can explode.

7 Plus, in addition, we have the potential contribution of
8 methane that enhances the potential explosion problem of the
9 coal dust.

10 Q. Dr. Rangwala testified, and I'll quote him:

11 "With micro dust cloud, the quantity of energy is
12 needed on an order of 5 to 10 joules, end quote, to
13 cause an explosion."

14 And that's in yesterday's transcript, Page 417, Lines 11
15 through 13.

16 Do you have an opinion on whether a spark could can have
17 10 joules?

18 A. Of course. Sparks from mechanical impact or from friction
19 for example, steel with cement, with concrete from a bulldozer
20 or something like that, it can -- or friction from mechanical
21 grinding or something -- this type of sparks can generate
22 energy on the order of 10 or more joules.

23 Q. Okay.

24 A. It is something that I have worked quite a bit with in my
25 research.

1 Q. Dr. Rangwala also testified that, quote: To ignite a gas
2 methane cloud, you barely need, like, 1 milijoule, end quote.

3 And that was at Page 417, Lines 10 through 11.

4 You mention that coal off-gases methane. Does that
5 include bituminous coal?

6 A. Yes.

7 Q. Does having coal in an enclosure affect the potential for
8 an explosion?

9 A. Yes. An enclosure reduces air current that could be used
10 -- so in order to have an explosion, you have to have a
11 combustible or a flammable mixture of coal dust and air, or
12 coal dust, methane and air.

13 If there are air currents, it will be used, the mixture,
14 and it may not reach the condition necessary for an explosion.

15 So when you enclose the facility, you reduce the wind, the
16 potential for wind, diluting the mixture but also cooling the
17 coal.

18 So that's one of the reasons for an enclosure, to
19 potentially facilitate --

20 Q. So does having coal enclosed in any way affect the ability
21 for dust to accumulate?

22 A. Yes. That's another reason to -- another possibility. So
23 what can happen is that if you don't have the wind, the coal
24 can accumulate and -- in wherever it is contained. And if
25 this -- if the structures are disturbed, the coal can separate

1 and form a cloud that, in the presence of a spark, it could
2 cause an explosion.

3 **Q.** Dr. Rangwala said that bituminous coal is a high-ranking
4 coal, and in comparison to lower-ranking coals is less prone to
5 self-heating.

6 Do you have an opinion on that?

7 **A.** Yeah. So he is right. But the fact is that all coals has
8 the potential for a spontaneous ignition and explosion. Some
9 more than others, and some in more or less aspects than others.

10 Bituminous coal has less potential for self-ignition than
11 sub-bituminous coal, but it has more than anthracite.

12 **Q.** How does bituminous coal compare with sub-bituminous coal
13 for the heat it generates when it burns?

14 **A.** It's hotter. So it burns hotter.

15 **Q.** Okay.

16 **A.** That's why it's preferred in power plants.

17 **Q.** Great. Let's find Exhibit 1274. And that is the exhibit
18 that I put the tab in.

19 **THE COURT:** Thank you.

20 **MR. COLVIG:** You bet.

21 (Document displayed.)

22 **BY MR. COLVIG**

23 **Q.** I'll just read the title. It's a report from the National
24 Institute of Occupational Safety and Health, from NIOSH,
25 entitled "Death in the Line of Duty... A Summary of a NIOSH

1 Firefighter Fatality Investigation" showing a release date of
2 September 14, 2012.

3 Dr. Pello, based in your experience in these matters and
4 your work on this case, do you have an opinion about whether
5 this article is reliable information from a reliable source?

6 A. I don't have any reason to think that it's not reliable,
7 no.

8 Q. Have you seen this report cited in any of the reports in
9 this case?

10 A. Yes. Yes, sir.

11 Q. Which?

12 A. Well, I think that if I remember where ESA cites in its
13 report, I -- I did cite it in my report, and I believe -- I'm
14 pretty sure that Dr. Rangwala also cited in his report.

15 Q. Okay. I'm going to read a passage from Page 5 of that
16 report.

17 "One of the primary concerns for the bulk storage
18 of coal is its ability to produce its own heat. The
19 storage of bulk coal, whether inside a silo or
20 stockpiled on the ground, releases heat slowly through
21 oxidation. It is possible for enough heat to be
22 released over a period of time to raise the coal
23 temperature to self-ignition or spontaneous
24 combustion. Such fires can be very stubborn to
25 extinguish because of the amount of coal involved

1 (often hundreds of tons) and the difficulty of getting
2 to the seat of the fire.

3 "Moreover, bituminous coal in either the
4 smoldering or flaming stage may produce copious
5 amounts of methane and carbon monoxide gases. Methane
6 is not a concern with sub-bituminous PBR coals. In
7 addition to their toxicity, these gases are highly
8 explosive in certain concentrations and can further
9 complicate efforts to fight this type of coal fire.
10 Even the most universal firefighting substance, water,
11 cannot always be used because of the possibility of a
12 steam explosion. Water contributes to the exothermic
13 reaction of coal, increasing the fire problem."

14 **MR. SWEDLOW:** Your Honor, I just object. We don't
15 have a question, and this is just reading a document.

16 **THE COURT:** I assuming he is going to ask whether he
17 agrees with this lengthy passage.

18 **MR. COLVIG:** The Court anticipates me very well.

19 **BY MR. COLVIG**

20 **Q.** Do you agree with this passage?

21 **A.** Yes, I do.

22 **Q.** Thank you.

23 Can you tell us what an exothermic reaction is?

24 **A.** Well, it's a chemical reaction that releases heat.

25 **Q.** Let's turn to coal fires at other facilities.

1 Do you recall any discussion with Dr. Rangwala on this
2 subject yesterday?

3 A. I think so. I'm not sure.

4 Q. You don't remember me discussing the other facilities
5 with --

6 A. Yeah, yeah. The topic, yes.

7 Q. Other facilities. Okay.

8 A. Yes.

9 Q. And you recall the discussion about the coal fires on
10 conveyors including the 2000, 2001 fires at LAXT, the 2000 fire
11 at Norfolk, the 2014 fire in New South Wales, and the 2015 fire
12 in Scotland?

13 A. Yes, sir.

14 Q. Let's talk about the LAXT terminal fires for a moment.
15 Did ESA discuss those fires in its report?

16 A. Yes, sir.

17 Q. Okay. How many fires were there?

18 A. There were two fires. One was in, if I recall, in 2000.
19 I think it was September of 2000. And I believe that this
20 photograph here belongs to the first fire.

21 Q. Which was the other?

22 A. And then there was a second fire in 2001. I think it was
23 February. And this is the photograph of the second fire.

24 Q. Are there any lessons that can be taken from those fires?

25 A. Actually, I do. I do think that there are some important

1 lessons. And to me, a very important lesson is that often in
2 the literature, the issue of a spontaneous ignition is
3 addressed, and explosion of coal. However, there is not that
4 much work done on the issue of ignition of coal by an adjacent
5 source of heat. And this is a very clear case of that. You
6 have the -- the role is in the conveyor belt -- in the conveyor
7 belt overheating, and heating the coal and igniting the coal.

8 And so that's a pretty particular form of ignition because
9 it requires much lower temperatures and overall a smaller
10 amount of coal.

11 **Q.** We've got to keep going. Let's keep going. What else --

12 **A.** There are several things that they are important here.

13 Another thing is that this was an enclosed facility. And
14 they have sensors.

15 **Q.** What kind of sensors?

16 **A.** It was infrared detectors, for temperature. And still you
17 had a fire. At the time that it was built -- I think it was
18 1997 -- it was considered a state-of-the-art facility. And
19 then you have two fires. So they tried to -- you would think
20 that they would try to plan it, to prevent. And still you had
21 a fire.

22 So the best of intentions don't necessarily prevent a
23 fire.

24 **Q.** Okay. Did you review Section 6 of the ESA report
25 regarding fire and explosion risks?

1 **A.** Yes, sir.

2 **Q.** Is there anything in that section that you disagreed with?

3 **A.** No, sir.

4 **Q.** Do codes, best practices, best technology and permits
5 guarantee that there will be no fires or explosions at a
6 facility?

7 **A.** Well, they certainly help mitigating the fire. Now,
8 preventing it is -- my general experience through my years of
9 consulting is that when an accident happens, it's a sequence of
10 event. It's not a single event. It's a sequence of events,
11 that they are very difficult to foresee in a coal or in a -- or
12 in relation of this practice.

13 I have worked on regulated industry, and I have seen
14 accidents. Actually, we have here -- in the Bay Area, we have
15 the refinery in Richmond and Benicia. These are highly
16 regulated industry. And we have had accidents that has
17 caused -- they call for shelter in place.

18 **Q.** How do you evaluate the danger of a potential fire in
19 general?

20 **A.** Well, I think that should be evaluated. One is the chance
21 of the probability that it will happen with time. And the
22 second is more of the consequences. So you can have a very
23 small chance by a very high consequence, and that's -- that's a
24 high risk.

25 I have a project in -- with NASA for fires in the space

1 station on the spacecraft. And this is very critical. You
2 cannot have a fire.

3 **Q.** Do you have an opinion on the chances of a fire or
4 explosion happening at the proposed OBOT facility?

5 **MR. SWEDLOW:** Your Honor, I'm going to object. This
6 is not a disclosed opinion in the report anywhere -- chances of
7 a fire.

8 **MR. COLVIG:** I believe it was.

9 "Coal as a substance that is" --

10 **THE COURT:** Wait, wait, wait. Hold on a second.
11 Where are you reading from?

12 **MR. COLVIG:** I'm reading from the rebuttal report.

13 **THE COURT:** Okay.

14 **MR. COLVIG:** Page 16. It's actually the last
15 sentence.

16 **THE COURT:** Trial Page 16?

17 **MR. COLVIG:** I'm sorry. The -- it's the last page of
18 the report. Oh, well, the body of it, 17.

19 And he also testified in his deposition --

20 **THE COURT:** Okay. You can ask the question.

21 **BY MR. COLVIG**

22 **Q.** What are the chances of a fire or explosion happening at
23 the proposed facility?

24 **A.** I think that they are high.

25 **Q.** Why?

1 **A.** The reason -- there are multiple reasons. One of them is
2 the particular characteristics of coal. The fact that it
3 self-ignites, that it spontaneously combusts, that it produces
4 dust that is explosive. The fact that it can contain methane
5 that contributes to the explosion. The fact that it has a
6 lower ignition temperature.

7 But mostly I think what is very important is that we are
8 talking about a facility that is planned for operation for
9 60-plus years, with millions of tons of coal, of throughput
10 yearly, with hundreds of train cars going daily.

11 So that -- that is a lot of time for the possibility of an
12 accident to occur.

13 You would need that. The design is perfect, that the
14 fabrication is perfect, that the mountain is perfect, that the
15 operation is perfect, that there are not failures at all. And
16 we know that they are.

17 **Q.** Do you have an opinion regarding the consequences of a
18 fire or explosion event at the proposed facility?

19 **A.** Well, I -- personally I think that they would be
20 catastrophic.

21 **Q.** Why?

22 **A.** Because the potential where OBOT is going to be is near a
23 very highly density population. It's near the toll plaza. And
24 the prevailing winds -- if there is a fire or an explosion, the
25 prevailing winds are going to send the products or combustion

1 to those regions.

2 **MR. COLVIG:** Thank you, Dr. Pello.

3 **THE COURT:** Cross?

4 **CROSS EXAMINATION**

5 **BY MR. SWEDLOW**

6 **Q.** Good afternoon, Dr. Pello.

7 **A.** Good afternoon.

8 **Q.** You said you reviewed the ESA reports. Do you recall
9 that?

10 **A.** Yes, I do.

11 **Q.** Did you review any other reports that were submitted to
12 the City Council?

13 **A.** Maybe, maybe not.

14 **Q.** All the reports that were submitted to City Council, so
15 ESA and any other report that you can recall, did any of those
16 reports actually quantify the risk of fire associated with a
17 bituminous coal facility in West Oakland?

18 **A.** No.

19 **Q.** Did you quantify the actual risk of fire at the
20 anticipated OBOT bituminous coal facility in West Oakland?

21 **A.** I did not.

22 **Q.** Did you find any identified incidents in the ESA report or
23 any other report of spontaneous combustion at a bituminous coal
24 storage facility?

25 **A.** Well, the -- the reports -- the cases that I identify in

1 any report, most of them, they don't say whether it's
2 bituminous or not.

3 Q. Right. So what I'm asking is, do you know of any
4 identified incidents of spontaneous combustion involving
5 bituminous coal at a storage facility?

6 A. No, I don't know. Of course, I don't know that there are
7 not either. I mean -- so what I am saying is that --

8 Q. It's possible, right?

9 A. It's possible.

10 Q. Do you know of any identified incidents of rail car
11 explosions involving bituminous coal?

12 A. No.

13 Q. Do you know of any incidents of dust explosions involving
14 bituminous coal at a storage facility?

15 A. I wonder if -- no, no.

16 Q. You were an expert in the litigation for the LAXT
17 facilities in those two fires, retained by the facility owner,
18 is that correct?

19 A. That's correct.

20 Q. But you still don't know the type of coal that caught fire
21 in that facility, do you?

22 A. No. It was not an issue.

23 Q. Your issue was -- one of your issues was that you said the
24 fire was started by spontaneous combustion, is that correct?

25 A. That's correct.

1 Q. And the jury found against your client on that issue, is
2 that correct?

3 A. I don't know.

4 Q. Did the jury find against your client?

5 A. Yes, but it doesn't mean that the jury rejected my
6 opinion. There were many other issues in the case.

7 Q. You're aware that the compaction of coal would delay any
8 theoretical spontaneous combustion for any type of coal; is
9 that right?

10 A. Not necessarily. It has to be compacted within certain
11 limits. In fact, compacting can enhance.

12 Q. Can you say that one more time?

13 A. In fact, compacting can enhance the spontaneous --

14 MR. SWEDLOW: Let's display Exhibit 930, Page 2. Can
15 we go back to -- now go to Page 2. That would be compacted
16 coal storage.

17 (Document displayed.)

18 BY MR. SWEDLOW

19 Q. You are not familiar with the NFPA Handbook on Coal
20 Compaction, is that correct?

21 A. Not too much.

22 Q. In fact, you didn't know that the NFPA handbook on coal
23 compaction existed until Dr. Rangwala testified about that
24 handbook, is that correct?

25 A. That is correct.

1 Q. So when you're saying that you know about coal compaction
2 at a certain density, it's based on the fact that Dr. Rangwala
3 identified the NFPA Handbook on Coal Compaction for you --

4 (Court reporter clarification.)

5 Q. When you say that coal compaction relates to a specific
6 density, that's because Dr. Rangwala identified the NFPA
7 handbook on coal compaction for you, that you didn't know about
8 before he identified it, isn't that correct?

9 A. That's not correct. I identified the issue of compacting,
10 and it is true -- what is correct is that Dr. Rangwala brought
11 the issue, but the main source of information comes from the
12 study of Schmal. It's a study that was conducted in the
13 Netherlands. And in that study, it shows that compacting by
14 itself does not reduce the potential onset of -- onset of
15 ignition. What that study showed is that there not certain
16 type of compacting reduces the potential for spontaneous
17 ignition, but not any compacting.

18 Q. You're not aware of documented incidents of spontaneous
19 ignition at any bituminous coal facility ever in the history of
20 the world, are you?

21 A. Well, I -- I'm aware of a -- of accidents where coal was
22 involved, and there is no specification whether it's bituminous
23 or not.

24 Q. Right. My question is: Do you know of any identified
25 incidents that used -- that related to bituminous coal where

1 there was spontaneous combustion at a facility?

2 **A.** I don't.

3 **Q.** You didn't quantify the risk or the reduction of risk that
4 would be associated with compliance with fire codes or safety
5 designs related to fire risk, did you?

6 **A.** No. I'm not a risk expert.

7 **Q.** You're not a risk expert, meaning you didn't actually
8 identify the quantum of risk associated with fire or explosion
9 at this site, did you?

10 **A.** In order to quantify that, you need to have an expertise
11 on risk, to be a risk analysis person.

12 **Q.** And you didn't do any risk analysis --

13 **A.** I told you that --

14 **Q.** -- for fire -- let me just finish.

15 For fire or explosion at this anticipated facility, did
16 you?

17 **A.** No, I am not -- I could not have done it, because I don't
18 have the expertise to do it.

19 **MR. SWEDLOW:** Thank you. No further questions.

20 **THE COURT:** Anything further?

21 **MR. COLVIG:** No.

22 **THE COURT:** Thank you very much.

23 (Witness excused.)

24 **MS. LOARIE:** Defendants call Mr. Steve Sullivan.
25

SULLIVAN - DIRECT EXAMINATION / LOARIE

STEPHEN SULLIVAN,

called as a witness for the defendant herein, having been duly sworn, testified as follows:

THE WITNESS: I do.

THE CLERK: Thank you. Please be seated.

THE WITNESS: Thank you.

THE CLERK: And for the record, please state your first and last name and spell both of them.

THE WITNESS: Steven, S-T-E-P-H-E-N, Sullivan, S-U-L-L-I-V-A-N.

THE CLERK: Thank you.

DIRECT EXAMINATION

BY MS. LOARIE

Q. Good afternoon, Mr. Sullivan.

A. Good afternoon.

Q. Can you tell us how long you've worked in the rail industry?

A. I have 43 years worth of experience in the rail industry.

Q. What positions have you held?

A. The first 26 years were with a Class 1 railroad, with Conrail. Started as a brakeman. And my last assignment at Conrail was Director of Corporate Strategy doing mergers and acquisitions.

I then moved on to become the chief operating officer at a trade association in Washington D.C., representing

1 600 railroads. And then after that, for the last four years
2 I've been a consultant working for a railroad consulting
3 company.

4 **Q.** So if I add the math, it's 40-some years?

5 **A.** Forty-three.

6 **Q.** Okay. Do you consider yourself a rail expert?

7 **A.** I do.

8 **Q.** Could I actually show Exhibit 485, TX Number 0034.

9 (Document displayed.)

10 **MS. SHAW:** Your Honor, again, this is for
11 demonstrative purposes. No objection, but, obviously, an
12 objection to the admission on hearsay grounds.

13 **MS. LOARIE:** Well, we'll concentrate on his resume,
14 and we can take up the objections, I believe, after trial on
15 these issues. Is that okay with the Court?

16 **THE COURT:** That's fine. But if you're -- and if
17 you're using his resume as a demonstrative, I suppose that's
18 fine. You can also just ask him about his qualifications.

19 **MS. LOARIE:** We'll be doing both.

20 **BY MS. LOARIE**

21 **Q.** In any event, do you have experience with coal handling in
22 the rail industry?

23 **A.** Yes, I do have some.

24 **Q.** What's that experience?

25 **A.** One of my first early assignments as a manager with

1 Conrail, I was responsible for a terminal improvement project
2 where we installed a rotary dump coal operation at our
3 Ashtabula coal dock.

4 After that I had operational responsibility over Detroit
5 Edison unit coal trains and their unloading process, and the
6 coal port in Toledo, Ohio.

7 After that, I was working with the capital acquisition
8 plan at Conrail and did the justification and the cost benefit
9 analysis on acquiring the stacker reclaimer for Ashtabula.

10 **Q.** Let me stop you for a minute. What is a stacker
11 reclaimer?

12 **A.** Stacker reclaimer is a giant gantry-like piece of
13 equipment that moves around the coal piles, and it actually
14 disassembles them and then restacks them to prevent pressure
15 from building up and spontaneous combustion, causing the piles
16 to catch on fire.

17 **Q.** Do you have any other coal-specific experience in the rail
18 industry?

19 **A.** I also worked on a prototype car for Conrail doing the
20 justification cost-benefit analysis that we put in to serve as
21 handling unit coal trains, and one of my last assignments at
22 Conrail was working on redesigning the coal network of the way
23 coal trains moved around the system.

24 **Q.** So it sounds like you have a lot of coal industry
25 experience.

1 In these operations, do you know what type of coal the
2 railroad was handling?

3 **A.** We were handling bituminous coal that was being mined out
4 of -- or I'm sorry -- anthracite coal that was being mined out
5 of West Virginia and Western Pennsylvania.

6 **Q.** Do you have any idea how that compares to bituminous coal?

7 **A.** It's harder. In the gradations of coal, the process is
8 pre-bituminous, bituminous, anthracite and then graphite. And
9 then we get to pure carbon after that.

10 **Q.** You talked about some experience in Ohio that was a coal
11 port, like an inland coal port. Have you ever seen coal dust
12 at port operations?

13 **A.** A lot of -- every port operation -- every coal unloading
14 operation I have been to produces coal dust.

15 **Q.** Have you ever seen coal dust along the rail lines?

16 **A.** Oh, yes. Yes. In fact, I have personal experience with
17 coal dust flying along the railroad right of way. As a young
18 trainmaster, one of the things that we were always instructed
19 to do when we were out on the property was to observe passing
20 trains. And on one particular day, I was in a high-rail
21 vehicle, which is a dual-mode highway and rail vehicle, and I
22 stood --

23 **MS. SHAW:** Your Honor, I apologize, but I object and
24 move to strike this line of testimony. This anecdote is not an
25 opinion expressed in the report.

1 **THE COURT:** I gather it's an effort to establish his
2 qualifications. I'm not quite sure how it does, but I'll allow
3 it.

4 **A.** Anyways, as the coal train approached, I moved across,
5 opposite the coal train, about 40 feet away -- 30 to 40 feet
6 away so that I could observe it passing. After it passed, I
7 had to go home and change because I was completely covered in
8 coal dust.

9 **BY MS. LOARIE**

10 **Q.** And you mentioned you are a consultant now. Can you talk
11 about any of your representative clients.

12 **A.** We represent railroads, shippers, government authorities,
13 and special interest groups from time to time.

14 **Q.** And did you offer any opinions in this case on coal dust
15 or covers?

16 **A.** I did.

17 **Q.** The first opinion, I think, was on coal dust, if memory
18 serves.

19 **A.** Yes, I did offer an opinion on coal dust.

20 **Q.** What analysis did you do on coal dust?

21 **A.** The amount of coal dust that escapes through the bottom of
22 a coal car.

23 **Q.** Did you make any assumptions in -- in that analysis?

24 **A.** The assumptions that I used were based on the Basis of
25 Design report. OBOT had indicated they were going to use rapid

1 discharge bottom dump coal cars. And the assumptions that I
2 used were a release of coal dust that occurs through the bottom
3 of coal cars.

4 Q. Did you assume that there would be anything on top of the
5 car?

6 A. No, I didn't, because in the Basis of Design report, OBOT
7 had indicated that they were going to put covers on the cars.

8 Q. So you assumed covers in your coal dust opinion?

9 A. In the coal dust opinion, yes.

10 Q. Was it realistic to assume covers?

11 A. No, they're not used in the industry, but because I wanted
12 to take a conservative approach to fugitive coal dust, I
13 assumed that somehow they would be used in this case.

14 Q. So you limited your opinion based on the Basis of Design
15 that assumed using covers on coal cars?

16 A. Yes.

17 Q. How is coal typically shipped?

18 A. Coal is typically shipped in open cars, and then the cars
19 are loaded from the top. And the standard method of unloading
20 the cars after they've been transported is to actually twist
21 the car in train upside down, unload it and then twist it back,
22 and then move down to the next car and repeat the process.

23 Q. Is fugitive coal dust released from coal cars?

24 A. It is.

25 Q. And you mentioned, I think I heard, that coal dust comes

1 from both the top and the bottom normally?

2 **A.** There are a number of studies that have been done by
3 Burlington Northern Santa Fe, BNSF. And BNSF has modeled coal
4 dust escaping from coal cars, and it does escape from the top
5 and from the bottom.

6 **Q.** Can you quantify the coal dust loss from a typical coal
7 unit train?

8 **MS. SHAW:** Objection, your Honor. Mr. Sullivan is
9 offered as a rail operations expert. He is not, and he
10 candidly admits he is not an expert in calculating the amount
11 or rate of release of coal or fugitive dust.

12 **MS. LOARIE:** He offers an opinion in his report on
13 coal dust loss that we're going to discuss. So I would
14 disagree with that characterization.

15 **THE COURT:** Can you show it to me in his report?

16 **MS. LOARIE:** Yeah. Actually, I was just coming up
17 with it.

18 **MS. SHAW:** It's a different objection, your Honor.
19 It was about expertise. Mr. Sullivan candidly admits he
20 doesn't have expertise in calculating the amount or rate at
21 which coal dust is released.

22 **THE COURT:** Okay. And you can -- I suspect you will
23 cross-examine him on that. So I'll let him testify about it,
24 and we can assess the weight of the testimony.

1 **BY MS. LOARIE**

2 **Q.** So if you want to turn -- we'll bring up Page -- TX Page
3 0028 in Exhibit 485. I think you have Exhibit 485 in front of
4 you. If you want to reference it or look at the screen, the
5 last paragraph.

6 (Document displayed.)

7 **MS. SHAW:** Your Honor, objection to this report.
8 Again, this is hearsay.

9 **MS. LOARIE:** I understand there to be a standing
10 objection on this report, and hopefully we can deal with it --

11 **THE COURT:** I don't want him -- I wanted him to
12 provide an opinion that he is offering here in court. I don't
13 want him to recite his expert report.

14 **MS. LOARIE:** Absolutely. And we're going to talk in
15 detail about that opinion and not just look at his report.

16 **THE COURT:** So why don't we just not read the
17 paragraphs from his report.

18 **MS. LOARIE:** We're not reading paragraphs from his
19 report. I was just bringing it up to the one number that he
20 cites there. I thought it would be helpful to the Court, but
21 if it's not, we're certainly happy to proceed without it.

22 **THE COURT:** I think you can elicit it without pulling
23 up the report.

24 **MS. LOARIE:** Sure thing.
25

1 **BY MS. LOARIE**

2 **Q.** So you just talked about there was a typical coal dust
3 loss figure, a percentage loss -- I think you said 3 percent of
4 coal dust that's loaded -- I'm sorry -- 3 percent of the total
5 coal that's loaded from the car is lost?

6 **A.** The documents that I used in my opinion, there is a
7 website citation that BNSF actually indicates that up to
8 3 percent of the total loaded coal can be lost to fugitive dust
9 while the train is moving from the loading facility to the
10 unloading facility.

11 The bottom loss is calculated to be 7 percent of the total
12 loss. So doing the math on a typically loaded coal car is
13 where my numbers came from.

14 **Q.** So could you do that math actually, calculate out what a
15 typical coal car has for coal and then do the percentages?
16 That's why I was hoping your report might serve to be helpful,
17 off the top of your head.

18 **A.** Well, no. I can recall what I put in the report and the
19 calculations. The BNSF study, again, was a study that was
20 printed to RETAC, which is the Rail Energy Transportation
21 Advisory Committee to the STB. And then in the Q and A,
22 session there was more information that came out about coal
23 loss.

24 So using the bottom dump hopper car as a template, and
25 there are various kinds that can hold anywhere from 115 to

1 130 tons per car, I did the calculation of how much dust would
2 be lost through the bottom of the car in the trip from the
3 origin point at Price, Utah to West Oakland and to the OBOT
4 facility. That calculation ranges again because of the varying
5 tonnages of the cars, anywhere from 50,000 pounds to
6 57,000 pounds per train per trip.

7 **THE COURT:** So you're saying your time is technically
8 up. And we gave you ten extra minutes, so you have nine
9 minutes left on your trial clock.

10 **MS. LOARIE:** Total?

11 **THE COURT:** According to Kristen.

12 **THE CLERK:** Out of the ten.

13 **MS. LOARIE:** I thought we had 15 minutes left.

14 **THE CLERK:** Ten.

15 **MS. LOARIE:** Okay. We'll go quickly.

16 **BY MS. LOARIE**

17 **Q.** So that's a 57,000-pound figure is the bottom loss figure
18 from -- from a coal car?

19 **A.** Yes.

20 **Q.** What factors go into your coal dust release from the
21 bottom of the car?

22 **A.** Well, there are two things that influence the release and
23 the amount of release. The type of train operations, so
24 switching movements, start-and-stop operations will - will tend
25 to release more coal than the actual movement of the

1 over-the-road operation. So in the case of a coal train coming
2 into the OBOT facility, the -- the train -- the preferred route
3 or the more preferential route would be the southern route,
4 which would bring it through Alameda, West Oakland, down
5 Embarcadero Street to a point just west of Embarcadero Street
6 where it would enter the Union Pacific yard. It would have to
7 traverse that yard to enter the support yard where the train
8 then would be stopped and broken into smaller segments, and
9 then taken back to the OBOT facility and switched through.

10 A lot of start-and-stop motion going on there.

11 The other factor is the distance traveled, because the
12 longer the train is on the line of road, the more the coal has
13 a chance to grind and grate together, compress, pulverize and
14 the fine particulate matter moves to the bottom of the car
15 where it then gets released.

16 Q. So some of that coal dust loss would occur in West Oakland
17 outside the OBOT property?

18 A. Yes.

19 Q. In terms of your fugitive coal dust loss, you also made an
20 opinion on covers in this case?

21 A. I did.

22 Q. And what was that opinion?

23 A. Well, they're not being used in the industry. There
24 are -- there are proposals for ideas to cover cars. There has
25 never been a proof of concept, a prototype design or any

SULLIVAN - CROSS EXAMINATION / SHAW

1 studies that have been done to -- to show the effectiveness of
2 covering coal cars.

3 Operationally, it doesn't make a lot of sense for a
4 railroad to use them.

5 **Q.** You also gave an opinion on the distance traveled
6 impacting coal dust. Is there more or less loss at the end of
7 a trip from the bottom?

8 **A.** In this particular case, because we're traveling a
9 thousand miles either over the northern or the southern route,
10 and there is a lot of switching, stop-and-start motion that
11 goes on at the back end, especially at the -- within the West
12 Oakland and at the OBOT facility, the dust loss would be
13 higher.

14 **MS. LOARIE:** Okay. Nothing further.

15 **THE COURT:** Thank you.

16 **CROSS EXAMINATION**

17 **BY MS. SHAW**

18 **Q.** Good afternoon, Mr. Sullivan.

19 **A.** Good afternoon, Ms. Shaw. How are you?

20 **Q.** Fine, thank you.

21 Mr. Sullivan, the application of covers to rail cars
22 carrying lignite coal is in use, correct?

23 **A.** The application of covers to lignite, I wouldn't
24 necessarily call it coal. It's a totally different product
25 that's in use, that is correct.

1 Q. You consider yourself an expert in rail operations?

2 A. Yes.

3 Q. And just so that we're clear, for purposes of your
4 opinions in this case, you are assuming that the rail cars
5 coming into the OBOT terminal will be covered, correct, sir?

6 A. Part of my opinion, yes, that's correct.

7 Q. Now, you do not consider yourself an expert in calculating
8 the amount or rate of release of particulate matter from a
9 moving train, correct?

10 A. I am not an expert on dust release, that is correct.

11 Q. And you do not consider yourself an expert in calculating
12 the amount or rate at which coal dust is released from a moving
13 coal train, correct?

14 A. Other than citing the recognized experts in the industry,
15 BNSF, you're correct.

16 Q. All right. Now, there are several designs for rapid
17 discharge rail cars, correct?

18 A. Yes, there are.

19 Q. And you're not aware of the particular design or model of
20 rapid discharge cars that are planned to carry coal to the OBOT
21 terminal, correct?

22 A. I am not aware, that is correct.

23 Q. And you also do not know which make or model of rail cars
24 were used in BNSF's study of emissions from the bottom of rail
25 cars, correct?

1 **A.** Yes. I say that's fair, yes.

2 **Q.** You do know that the coal used in the BNSF study was coal
3 from the Powder River Basin, correct?

4 **A.** The study that I cited was Powder River Basin coal, yes.

5 **Q.** And you don't have an opinion about how maintenance
6 practices affect the potential for coal dust to be emitted out
7 of the bottom of rapid discharge rail cars like those made by
8 Trinity Rail Car, correct?

9 **A.** I'm not sure I understand the question.

10 **Q.** Sure.

11 You're not offering an opinion about how maintenance
12 practices affect the potential for coal dust to be emitted out
13 of the bottom of rapid discharge rail cars like those made by
14 Trinity Rail Car, correct?

15 **A.** I have not offered an opinion on the maintenance of the
16 cars, no.

17 **Q.** And you have no opinion about whether a lip on the bottom
18 doors of a rapid discharge rail car impacts the potential for
19 coal dust to escape out of the bottom of the car, correct?

20 **A.** Actually that's not true. And I think we talked about
21 this in deposition as well. So any time there are plates,
22 seams, enclosures in the bottom of the car, there is an
23 opportunity for coal dust to be lost.

24 In my experience in railroad operations, I did have coal
25 cars that were losing coal dust through the bottom of

1 enclosures on the bottom of coal cars.

2 **MS. SHAW:** All right. Can we get up Mr. Sullivan's
3 deposition at Page 167, Line 14 through 19?

4 (Document displayed.)

5 **BY MS. SHAW**

6 **Q.** (As read)

7 **"QUESTION:** Do you have an opinion about whether a lip
8 on the door which locks or seals" --

9 (Court reporter clarification.)

10 **"QUESTION:** Do you have an opinion about whether a lip
11 on the door which locks or seals the flat edge of the
12 bottom outlet doors on a rapid discharge aluminum rail
13 car impacts the potential for coal dust to escape out
14 of the bottom of the car?

15 **"ANSWER:** I don't know that I have an opinion."

16 Was that your testimony, sir?

17 **A.** There is more to that answer.

18 **Q.** And your counsel can ask that question.

19 Was that your testimony?

20 **A.** That was part of it, yes.

21 **Q.** You've never worked at a railyard where coal was being
22 bottom-dumped from rapid discharge cars, correct?

23 **A.** No, that's not true.

24 **Q.** All right. Let's look at page -- at deposition -- well,
25 you have never worked at a railyard where coal was being

1 bottom-dumped from rapid discharge cars that are being at issue
2 here, correct?

3 **A.** That is correct.

4 **Q.** Thank you.

5 Now, profile shaping is the same thing as bread loafing,
6 correct?

7 **A.** Yeah. That's an industry term, yes.

8 **MS. LOARIE:** Objection. Outside the scope of exam.

9 **THE COURT:** I don't know because I don't know what
10 profile shaping or bread loafing is.

11 **MS. LOARIE:** We didn't talk about it, right?

12 **BY MS. SHAW**

13 **Q.** Well, profile shaping is the manner in which you -- let's
14 see. Let's use your -- "reshaping the design of the way the
15 coal sits in the car when it's loaded," correct?

16 **MS. LOARIE:** I stand by my objection.

17 **THE COURT:** That's overruled.

18 **A.** It is. So when coal is loaded in the car, it has a
19 tendency to peak. And bread loafing is a way of reshaping it
20 to kind of flatten out the peaks in the car.

21 **BY MS. SHAW**

22 **Q.** And profile shaping is used in the rail industry to
23 control or mitigate coal dust in train operations, correct?

24 **A.** It is one of the methods, correct.

25 **Q.** And water sprays are also used in the rail industry to

1 control and mitigate coal dust in train operations, correct?

2 **A.** Under certain circumstances, that's also correct, yes.

3 **Q.** And topical surfactants are employed in the rail industry
4 to control and mitigate coal dust in train operations, correct?

5 **MS. LOARIE:** Objection. Outside the scope of exam.

6 **THE COURT:** Overruled.

7 **A.** Topical surfactants are also a method that's employed.

8 **BY MS. SHAW**

9 **Q.** Now, you testified about your work for the Short Line
10 Railroad Association, correct?

11 **A.** Yes.

12 **Q.** And you undertook training relating to hazardous materials
13 in connection with your work with the Short Line Railroad
14 Association, correct?

15 **A.** One of my undertakings, yes.

16 **Q.** That course did not address coal, did it?

17 **A.** No, it did not.

18 **Q.** And that course did not address petcoke, correct?

19 **A.** It did not.

20 **MS. SHAW:** Thank you.

21 **THE COURT:** Anything further?

22 **MS. LOARIE:** No.

23 I think we will be calling -- if I do a time check, I
24 believe OBOT is out of time and we have a few minutes left, so
25 we would probably proceed to the next witness.

1 **THE COURT:** Kristen is the keeper of the time.

2 It sounds like you're excused. Thank you very much.

3 **THE WITNESS:** Thank you, your Honor.

4 (Witness excused.)

5 **MR. SIEGEL:** Also, your Honor, we would like some
6 time to discuss the post-trial briefing.

7 **THE COURT:** Of course.

8 So what -- so the next witness is video testimony, is that
9 right?

10 **MS. LOARIE:** It's video testimony. And we had
11 offered to, after this morning, play OBOT's counters. I don't
12 know if they have any time left, but I prefer to --

13 **THE COURT:** I think Kristen is showing some time
14 left.

15 **MS. LOARIE:** I have time to re-examine. Six minutes.

16 **THE CLERK:** They still have four minutes left.

17 **THE COURT:** We'll watch the whole video.

18 **MS. LOARIE:** The whole video. Okay. Thank you.

19 **THE COURT:** And who are we hearing from?

20 **MS. LOARIE:** We will be hearing from Mr. James Wolff,
21 the Bowie Resource Partners CEO.

22 **THE COURT:** Great.

23 **JAMES WOLFF,**
24 called as a witness for the defendant herein, testified via
25 videotaped deposition played in open court, not reported.

1 **THE COURT:** I thought for sure you were going to end
2 on the sentence where he said you don't want to breathe in coal
3 dust. That's like the best -- the best ending.

4 **MS. LOARIE:** My apologies.

5 **THE COURT:** All right. So are we all done?

6 **MR. AKER:** Yes, your Honor.

7 **THE COURT:** All right. So what -- how do you-all
8 want to proceed in terms of post-trial filings, the when and
9 the how and all that?

10 **MR. FELDMAN:** I have a good idea about the when.
11 That would be two weeks from Monday.

12 And then a subsequent filing ten days from two weeks from
13 Monday, simultaneous filings.

14 **THE COURT:** I never allow simultaneous filings.

15 **MR. FELDMAN:** I know better.

16 **THE COURT:** And so maybe it would be helpful to talk
17 about what you-all want to file before talking about when they
18 should be filed.

19 **MR. FELDMAN:** And, actually, I think, perhaps
20 uncharacteristically, you should tell us.

21 **THE COURT:** Well, I think that you should file
22 proposed findings of fact and conclusions of law.

23 **MR. FELDMAN:** That's what I thought.

24 **THE COURT:** And those, by the way, should include --
25 so for any -- for any point that you want to establish, it

1 should have all the key citations to the record, as you know.
2 It should also hyperlink to those citations so that we can
3 access them quickly.

4 **MR. FELDMAN:** Would that include the transcript?

5 **THE COURT:** Yes. That would be very helpful. Thank
6 you.

7 And so proposed findings of fact and conclusions of law.
8 That, I wouldn't mind -- if you want to file those
9 simultaneously, that's probably fine.

10 And then evidentiary objections, as we discussed. I think
11 as the dust settles, so to speak, you know, you'll find that
12 many of your objections were less important than you thought
13 they were when you made them, and so hopefully you can just
14 focus on the ones that really matter in your document, setting
15 forth your arguments for which exhibits or which aspects of the
16 testimony I should not be considering at all.

17 So those would be the two things for sure.

18 Is there anything else?

19 **MR. FELDMAN:** Your Honor, may I ask a question?

20 **THE COURT:** Yeah.

21 **MR. FELDMAN:** Could you give us a hypothetical
22 example of a conclusion of law? It doesn't have to be this
23 case. What I mean by that is --

24 **THE COURT:** By the way, I sort of appreciate your
25 question, because I hate findings of fact and conclusions of

1 law. I think they are -- I mean, I think the whole findings of
2 fact, conclusions of law exercise is kind of lame, but we -- we
3 do have a rule that requires us to --

4 **MR. FELDMAN:** Well, if it's not -- I'm sure that
5 Mr. Finberg would agree that if it's not going to help you,
6 we're not interested in doing it.

7 **THE COURT:** But I think it will -- well, okay. So --

8 **MR. FELDMAN:** I actually think --

9 **THE COURT:** In other words, you're proposing maybe
10 just filing something on the facts?

11 **MR. FELDMAN:** That's what I was about to say.

12 **THE COURT:** I would be fine with that.

13 **MR. FINBERG:** Are we going to do post-trial briefs
14 then?

15 **THE COURT:** I'm perfectly happy for you to do them,
16 if you would like to do them.

17 **MR. FINBERG:** I think, yes, we would like to do
18 post-trial briefs if we're only going to do findings of fact.

19 **MR. FELDMAN:** I don't have any problem with that.

20 **THE COURT:** Yes. That's perfectly fine.

21 **MR. FELDMAN:** I think, shockingly, everybody seems to
22 agree.

23 **THE COURT:** Okay.

24 **MR. FELDMAN:** That's why I was asking. I think
25 conclusions of law are not that useful.

1 **THE COURT:** Although I think there is utility in my
2 receiving sort of proposed findings of fact from you.

3 **MR. FELDMAN:** I agree. I agree.

4 **THE COURT:** So you really have to drill down and you
5 have to identify the parts of the record that support your ...

6 **MR. FELDMAN:** Yes.

7 **THE COURT:** So proposed findings of fact --

8 **MR. FELDMAN:** Yes.

9 **THE COURT:** -- as I -- in the manner that I
10 discussed. And then evidentiary objections.

11 So those are two separate documents presumably.

12 **MR. FELDMAN:** Yes.

13 **THE COURT:** And then post-trial briefs?

14 **MR. FELDMAN:** Okay.

15 **THE COURT:** That sounds great to me.

16 **MR. FELDMAN:** I think it's important. I don't know
17 if it's important, but I think it would be useful if
18 Mr. Finberg would stipulate to what you just said. I mean, I
19 don't want anybody to say someday that it wasn't done right.
20 So do you agree --

21 **THE COURT:** Is everybody in agreement?

22 **MR. FINBERG:** To getting rid of the conclusions of
23 law?

24 **THE COURT:** Proposed conclusions of law. I'm
25 required by the rules to file a document that's titled --

1 **MR. FINBERG:** I can only speak upon the behalf of
2 intervenors, but we have no objection to not having conclusions
3 of law. Kevin will have to speak for the City.

4 **THE COURT:** Proposed conclusions of law filed by you.

5 **MR. SIEGEL:** We very much want conclusions of law
6 ultimately from the Court, but proposed conclusions of law we
7 do not need to provide. We would like to provide proposed
8 findings as well as post-trial brief.

9 **THE COURT:** Post-trial briefs, that's fine.

10 **MR. FELDMAN:** May I suggest about ten days after the
11 three things -- the three things we just described, that there
12 be a further set of simultaneous briefs?

13 **THE COURT:** Well, I'll -- let's play with this a
14 little bit. What if we had -- first of all, whatever, like,
15 two weeks from Monday, let's say. And to me there is no magic
16 to any of these dates, and I'm happy to, you know, play around
17 with the dates.

18 **MR. SIEGEL:** We would like more time, Your Honor,
19 but ...

20 **MR. FELDMAN:** Our client has a need to get this
21 resolved, if possible.

22 **THE COURT:** We'll talk about that. But let's talk
23 about sort of the sequencing of that first.

24 So what if we had a date where the parties simultaneously
25 filed proposed findings of fact and evidentiary objections.

1 **MR. FELDMAN:** Yes.

2 **THE COURT:** Okay. And then some date after that, the
3 plaintiff files its post-trial brief, and sometime after that
4 the Defendants file their post-trial brief. I think that would
5 be a good sequence.

6 **MR. FELDMAN:** But we need to -- we need, at some
7 point, to be able to respond to whatever the Defendants say. I
8 have the impression -- in fact, I know based on what
9 Mr. Finberg said -- that there is going to be new stuff that we
10 never briefed before.

11 **THE COURT:** Well, yeah. To the extent that -- is it
12 still your plan to make some sort of post-trial motion based on
13 this issue, this issue that has not been part of the case so
14 far?

15 **MR. FINBERG:** We were going to address the government
16 code section argument, yes.

17 **THE COURT:** Okay.

18 **MR. FINBERG:** Do you want that in a separate motion
19 or do you just want it as part of the post-trial trial brief?

20 **THE COURT:** I think you can -- I certainly -- what I
21 would propose is -- I had forgotten about that issue.

22 There are going to be issues about whether it's
23 appropriate for that, that argument to be made at this stage in
24 the proceedings or whether it's more appropriately made in some
25 other lawsuit.

1 **MR. FELDMAN:** Or whether you've already decided it.

2 **THE COURT:** I don't think I've already decided it.

3 But -- I hope I haven't already decided it.

4 But in any event, certainly you would have to have an
5 opportunity to respond to that.

6 **MR. FELDMAN:** I really do think that -- I just -- if
7 past is prologue, we -- notwithstanding your best efforts,
8 there may be two ships passing in the night here. I don't know
9 exactly what straits we're sailing in. But I -- I really would
10 be very reluctant, unless your Honor orders it, to not be able
11 to respond to the legal arguments that we may encounter.

12 **THE COURT:** You want to have a reply --

13 **MR. FELDMAN:** Yes.

14 **THE COURT:** -- to the plaintiff. That's fine. For
15 the record, I mean, I've never seen a case where it mattered
16 who got -- to the outcome, who got the last word. And your
17 filing a reply will extend the period of all this, and you just
18 said that your client needs a ruling quickly.

19 **MR. FELDMAN:** I understand. I do understand this.

20 **MR. FINBERG:** Or the other way to do it would be to
21 have simultaneous post-trial briefs, except for this government
22 code issue. We could make a motion on that issue. They could
23 get an opposition, and we could get a reply.

24 **MR. SIEGEL:** For the City, I have a slightly
25 different proposal. And that is, just as the plaintiff doesn't

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1 have an opportunity to reply at rebuttal in this trial, I think
2 that the briefing should follow the same course. And if there
3 is anything simultaneously submitted, it would be the
4 government code motion, but not our friends, the intervenors,
5 who are interested in filing, and that could be filed at the
6 same time as the plaintiff's brief with the reply to come from
7 the plaintiff on that issue afterwards.

8 **MR. FINBERG:** You're stipulating to that, right?

9 **MR. FELDMAN:** Passing why the intervenors are filing
10 that motion as opposed to the City -- passing that, I do
11 think --

12 **THE COURT:** I mean, I was wondering if there might be
13 a standing issue or an issue about this being outside the scope
14 of the intervention that I allowed. But all of that stuff, you
15 can talk about in your briefs.

16 **MR. FELDMAN:** That's why I really do think that, if
17 it's acceptable to your Honor, that we ought to have -- I
18 really do mean this -- simultaneous briefs and then another set
19 of simultaneous briefs.

20 And I don't see why the briefs can't be filed at or
21 shortly -- shortly after the findings of fact and evidentiary
22 objections.

23 They are not independent, but they are not that -- they
24 ought to be somehow tethered to each other.

25 So I think that -- and I have done this. I know for sure

1 at least once, I was about to say --

2 **THE COURT:** I mean, I had simultaneous briefs, too,
3 both as a lawyer and as a judge. And I think they're terrible.
4 I mean, I really do. I think the parties are talking past each
5 other, and they don't get a meaningful way to respond to each
6 other.

7 **MR. FELDMAN:** That's why I'm suggesting. I'm sorry
8 I'm not being clear. Simultaneous opening briefs and
9 simultaneous second briefs.

10 **THE COURT:** I understand what you're saying. I think
11 that's terrible.

12 Well, what I'm going to do is I'm going to think about
13 this, and I'm going to put out an order telling you what I
14 want. But the upshot here is that we're going to be having
15 proposed findings of fact, and I assume that there will need to
16 be only one of those from the defendant's side.

17 **MR. SIEGEL:** I believe so. I don't see why --

18 **MR. FINBERG:** We can do that, yes.

19 **THE COURT:** Okay. And then evidentiary objections,
20 and I assume --

21 **MR. FINBERG:** We can do that together.

22 **THE COURT:** -- and I assume only one from the
23 defendant's side.

24 **MR. SIEGEL:** Yes.

25 **THE COURT:** And then post-trial briefs, which may

1 need to be done separately, at least on -- at least to the
2 extent that the intervenors are making this argument.

3 **MR. FINBERG:** Correct, on the government code
4 argument, intervenors are making it. It's not clear that the
5 City is joining.

6 **THE COURT:** So is it something where -- is that sort
7 of the only thing you want to submit by way of post-trial
8 briefing, is just on that issue? You know, do a separate brief
9 on that and then sort of join with the City of Oakland on the
10 main post-trial brief?

11 **MR. FINBERG:** We probably can do it that way. Or you
12 could give us a total number of pages among us, and we could
13 divide it up how we think is appropriate.

14 **THE COURT:** My preference would be for -- I think it
15 might be better for all involved for you-all to do it together.

16 **MR. FINBERG:** Okay.

17 **MR. COLVIG:** We're good friends, your Honor.

18 **THE COURT:** So there will be a separate brief from
19 the intervenors, maybe Oakland as well, but at a minimum a
20 separate brief from the intervenors on this government code
21 issue.

22 **MR. FINBERG:** Very good.

23 **THE COURT:** Okay.

24 Mr. Feldman said he would like to file the -- start off
25 the process by filing the proposed findings of fact and the

1 evidentiary objections two weeks from Monday. What's the
2 defendant's view on when that should happen?

3 **MR. SIEGEL:** Three weeks.

4 **THE COURT:** From Monday?

5 Okay. So let me -- and then, you know, my tentative view
6 is that I'm -- I'm not going to need to hear further argument,
7 but -- so keep in mind that that's my tentative view. And I --
8 as I often do with argument, I may well vacate the hearing.

9 But I'll set a hearing date for argument in case I decide
10 I need it. Okay? And that will be, you know, a couple weeks
11 after the final brief comes in or something like that.

12 **MR. FELDMAN:** Yes.

13 **THE COURT:** Okay.

14 **MR. FELDMAN:** Understood that what you're saying is
15 you're going to set a hearing date without any conviction that
16 you'll have it.

17 **THE COURT:** Exactly. Yeah. And usually I, you
18 know -- I vacate these hearings usually a week or five days
19 before the hearing so that your life is not made too miserable
20 preparing for no reason.

21 So that will be the plan, and I'll issue an order about
22 dates and order of briefing and whatnot.

23 **MR. FELDMAN:** If I may say, there is a week in March
24 that I'm not available.

25 **THE COURT:** Okay.

1 **MR. FELDMAN:** I can't remember exactly what week. I
2 know why, but I can't remember exactly what week. I think it's
3 the week of March -- it ends in March 20th or so.

4 **THE COURT:** Okay.

5 **MR. FELDMAN:** Although Ms. Shaw could probably argue
6 it. Not probably. She definitely could argue it better.

7 Yeah, there is a week in March. I think it's the third
8 week in March.

9 **THE COURT:** Okay. I'm not sure if that's an
10 incentive to schedule it for that week, but...

11 (Laughter.)

12 **THE COURT:** We'll see.

13 **MR. FELDMAN:** I can imagine.

14 **THE COURT:** I'll give it some thought. Thanks very
15 much to everybody.

16 **MR. AKER:** Thank you, your Honor.

17 **MR. FELDMAN:** Thank you, your Honor.
18 I would say that your Court Reporter deserves combat pay.

19 **MR. COLVIG:** Yes.

20 **THE COURT:** As well as the Courtroom Deputy, who has
21 gone home.

22 **MR. FELDMAN:** Thank you, your Honor.
23 (Whereupon at 4:22 p.m. further proceedings were
24 adjourned.)
25

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CERTIFICATE OF REPORTER

I certify that the foregoing is a correct transcript from
the record of proceedings in the above-entitled matter.

Debra L. Pas

Debra L. Pas, CSR 11916, CRR, RMR, RPR

Friday, January 19, 2018